

**Full Report of Climatic Analyses for**  
**LCCMR 2005 *Impacts on Minnesota's aquatic resources from climate change***  
**Phase I - W-12, Result 2: Historic Climate Data**  
**Prepared by Richard Skaggs and Kenneth Blumenfeld**

**Introduction**

This report summarizes three major accomplishments and undertakings during our investigation of Minnesota's historical climate record: 1) the development of a comprehensive, online, climate data retrieval tool; 2) the creation of data sets that summarize the temperature and precipitation characteristics over nine divisions within the state and over a wide variety of pre-defined "seasons"; and 3) the identification of persistent climatic episodes or regimes believed to be of particular relevance to Minnesota's aquatic resources. This report expands upon the abstract and project summary provided in the Result 2 Final Report.

## Online Climatic Data Retrieval Tool

The climate data retrieval tool, developed by the State Climatology Office, was essential to all climatic research undertaken in this project, because relating climate data to aquatic ecosystems and hydrology is a complex undertaking: different species have different critical and optimal climate conditions that vary geographically and through time, and the hydrologic implications of climate vary with the local topography. Thus, climate summaries must be tailored to the specific questions and locations of interest. The climate data retrieval tool has enabled project participants to extract climate variables important to their own specific questions, at time and space scales they deem relevant.

The climate data retrieval tool has three major components—a mapping tool, a climate scenario visualizer, and a climate time-series generator. Each of these can be accessed from a common page, shown as the first three buttons in Figure 1, below.

### MNlocApp client demos

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The hourly and daily map applications are demos of the use of 'plug-in' ASP-based applications that are 'hosted' by the MNlocApp.asp map application. MNlocApp will show the 'client' application page but also shows the map results and can provide user access to the digital files that were created in the process.

For these hosted 'mapping applications' the value of 'returnASP' is set to this page.

from  hourly  daily data  monthly grids

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An ASP or HTML application can also use MNlocApp.asp as a sort of subroutine that gets a location from a user. The time series statistics application does not have a reference back to this page. The time series application does however set 'returnASP' to itself so that MNlocApp.asp can 'return' to the time series application. Note that this use of MNlocApp.asp (unlike the 'hosted' applications above) requires very little knowledge of how MNlocApp works. It should have a 'hidden' input with name='returnASP' and value set to the complete URL for itself. When a user is done that URL will be used to navigate back. Values for 'Xutm83' and 'Yutm83' as well as 'passback' will be available to the calling application. ('passback' is a collection of name=value pairs that represent all the values that the application 'sent' to MNlocApp.asp from its form and can be handy for 'preserving state'.)

Another application that requires a user to choose a location is the 'Climate Scenario at a Place' page. (Note that application does not have a return button to this page.)

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The MNlocApp.asp can be used 'stand alone' as well as a geographical location conversion tool. Clicking on the map or map reference will set all the geographic coordinates. Alternatively, a user can modify one or more of the coordinates and press the 'update map' to recalculate the other parameters. Note that inputs named MINMAXX/Y (utm values of the corners) are provided here that can override the whole-state scale that is the default at startup.

show  don't show midwest detail   upper-left   lower-right <--080406 added new 'force layer' setting-->

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Note that MNlocApp.asp attempts to maintain a cookie that 'remembers' the user's settings for layer choices and size. That is, a user's map preferences will be persistent.

In the 'hosted' mode, any (most) files created in processing a map will be available as a download reference on the 'map settings' pane. These can include shapetiles, geo gifs, etc.

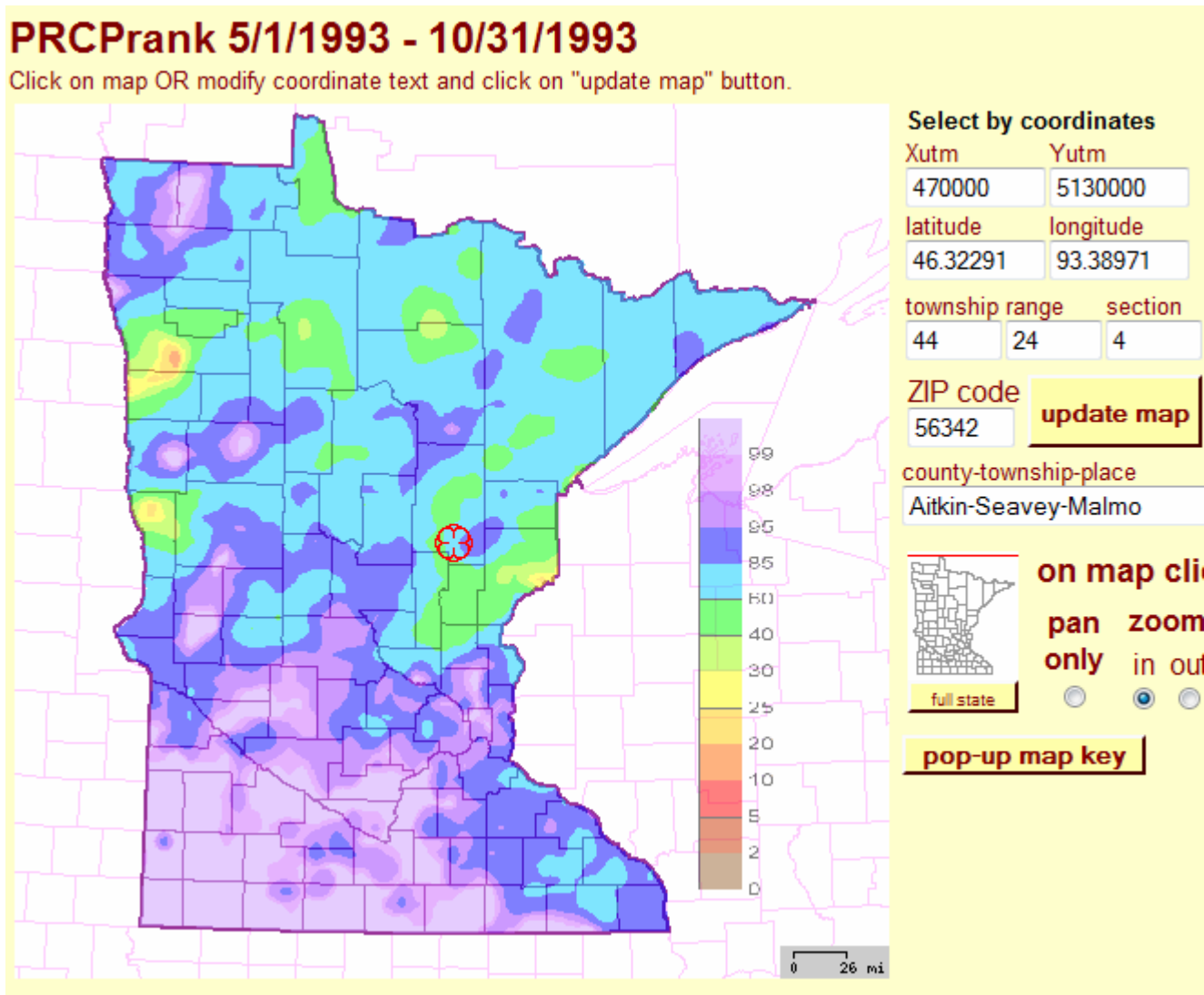
**Figure 1. The “launch” or home page of the climate data retrieval tool.**

The mapping component allows the user to select a time period of interest, and then map a climate variable of interest in a number of ways. Variables available are:

- maximum temperature
- minimum temperature
- average temperature
- precipitation amount (rain, melted snow etc.)
- snowfall amount
- snow cover (snow depth)

These variables can be mapped as the total or average, as the percentile rank, or as the departure from the “normal.” Data can be viewed in the native monthly form, or aggregated into user-defined “seasons,” such as November through March, or the “water year” of October through September. For

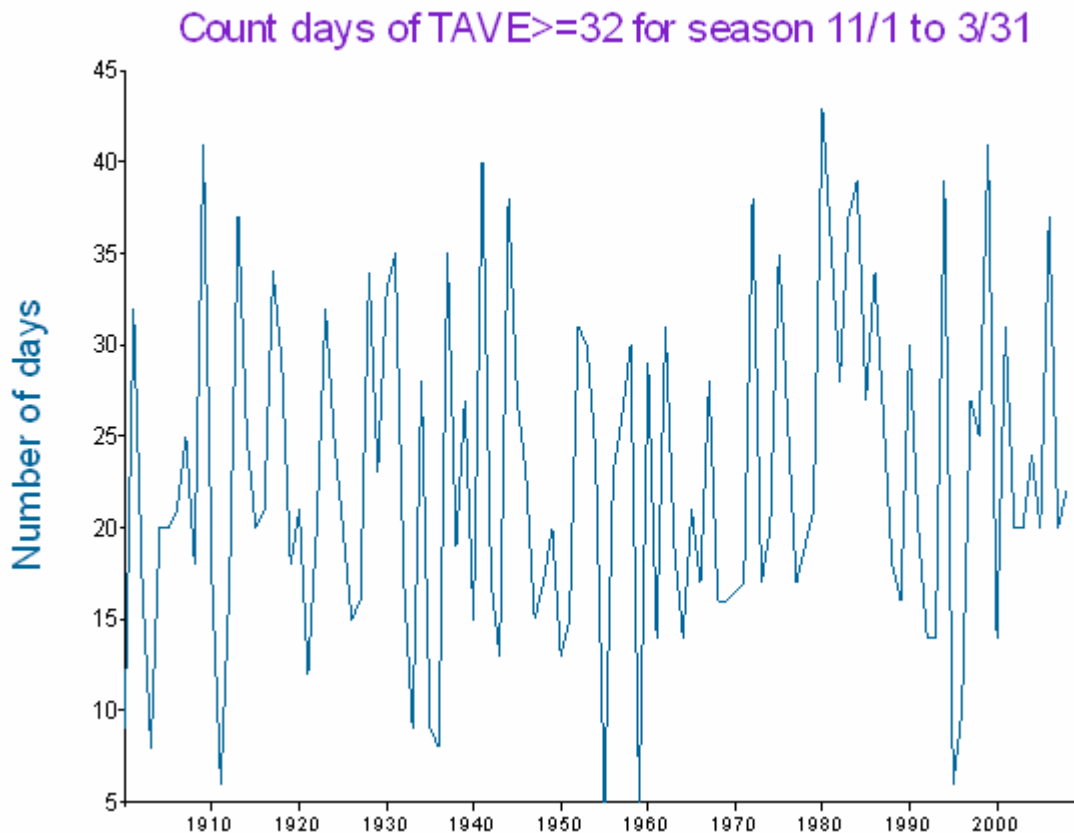
example, Figure 2 below shows the percentile rank of total precipitation during the May-October period of 1993, when conditions were abnormally wet, especially in the southern half of Minnesota.



**Figure 2. Percentile rank of total precipitation, May-October 1993; high values correspond to abnormally wet conditions.**

The time-series generator extracts climate time series data for point locations in the state. The location is specified by the user, and the data can be summarized in many different ways. Once again, a user-defined season can be specified, along with the starting and ending years if the entire record is not wanted. For example, the number of days with an average temperature at or above freezing, per November-March “winter” for Grand Rapids, during the period 1900-2008 is shown in Figure 3, below.

Count days of TAVE $\geq$ 32 for season 11/1 to 3/31



**Figure 3. Time series of days per November-March “winter” season in which the average temperature equaled or exceeded 32 degrees F at Grand Rapids, for the period 1900-2008.**

The climate scenario visualizer uses monthly climate data and allows researchers to examine two climate variables of interest simultaneously, over an area or spatial unit of the investigator’s choosing. Potential spatial units include:

- The entire state
- Nine climatological divisions
- Any of the 85 counties
- Any of 83 river basins
- Any of 37 major and minor ecoregions
- Any lakeshed with Division of Waters lake number
- Any point in the state

For any of these spatial units, the user may then select pairs of climate data variables (the same climate variables mentioned above). For the spatial unit and month or season selected, the visualizer ranks the climate variables from lowest to highest and plots them on a graph. This allows to the investigator to determine which years match some important combination of the two climate variables for a particular location or area. For example, the investigator can isolate the fifteen jointly warmest and driest May through September periods over the Cottonwood River basin, as is shown in Figure 4.

Edit one or more of the numerical rank values - on your next click or keypress *outside the text box* the selection rectangle will be updated.

var	low rank	val	dep	high rank	val	dep
PRCP inches May-Sep ave 16.935	0.000	8.490	-8.445	0.297	14.330	-2.605
TAVE °F May-Sep ave 65.479	0.677	66.236	0.757	1.000	69.830	4.351

All years:

Year	var1	V1rank	var2	V2rank
1891	12.840	0.1217	64.238	0.2000
1892	23.700	0.9478	61.634	0.0174
1893	10.830	0.0435	64.700	0.3304

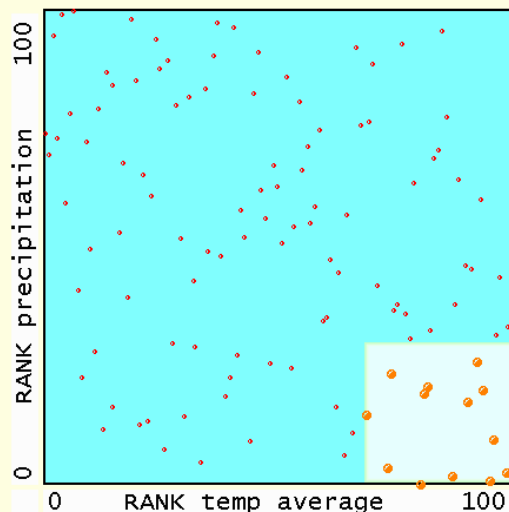
Floating your cursor over any of the plotted values will give the [year,var1,var2] for that point (precision needed for the small 'not selected' points.)

Selected years:

1894	8.560	68.314
1922	8.980	67.282
1931	9.980	69.194
1932	13.830	67.018

The above list gives contains [year,var1,var2] values corresponding to the light selection rectangle.

OR - (then) while pressing the *shift key* drag anywhere on the select box *lower right corner*.



**Figure 4.** The climate visualizing tool shown in the lower right, with the fifteen warmest and driest May through September periods in the Cottonwood River Basin highlighted. The scrollable box in the lower left shows the corresponding year, total precipitation in inches, and average temperature (F). The highlighted area in the visualizing tool can be moved and/or resized, resulting in different values displayed in the scrollable box.

## Climate Data Sets

For each of the nine climatic divisions (see Figure 5), we have 116 years of monthly temperature and precipitation data (1891-2006). For each climatic division we have created data sets summarizing the temperature and precipitation characteristics of the following seasons or periods, as recommended by our LCCMR project partners working in other scientific fields:

- Meteorological Summer (June through August)
- Aquatic Growing Season (May through October)
- “Winter” (November through March)
- Water Year (October through September)

For each season (or period) and division, we have calculated the long-term averages of temperature and precipitation, and have calculated z-scores (or standard scores) for individual years in each division’s time series of temperatures and precipitation. The z-score for a given value  $x$  is simply  $\frac{x - \mu}{\sigma}$ , where  $\mu$  is the mean and  $\sigma$  is the standard deviation. Thus, the z-score gives the number of standard deviations a given observation is from the mean. Using z-scores on un-transformed data assumes the data are normally distributed, which they are in this case.



**Figure 5. Minnesota’s nine climatic divisions. These divisions will be referred to by their location within the state—e.g., “northwest” or “NW”—rather than by number.**

This project was particularly concerned with “climatologically significant” periods, i.e., those believed by participants in this LCCMR project to exert an impact on freshwater resources. In general, that means periods of abnormal warmth, coolness, dryness, or wetness; obviously the impacts of these different climatic states on water resources will vary with the time of year, among other factors. In any case, we have identified periods nominally described as *warmer*, *cooler*, *wetter*, or *drier*, by finding seasons that are greater than one standard deviation from the mean for either temperature or precipitation. In normal distributions, approximately 17% of the values will have  $z \geq 1$ , and 17% will have  $z \leq -1$ . Thus, for each division, we are interested in seasons that are either the warmest 17%, the coolest 17%, the wettest 17% or the driest 17% (with some combinations of wet/cool, warm/dry etc.).

After consulting with our partners on this project, we agreed to further stratify data to identify periods that were *very* warm, wet, cool, or dry, and *extremely* warm, wet, cool, or dry. For the very and extreme categories, we selected thresholds of +/- 1.5 and +/- 2 standard deviations, respectively. In other words, these categories were defined by z-scores of 1.5, -1.5, 2, and -2. Any given season, therefore, can be described in terms of its temperature, and its precipitation characteristics. For instance, the summer of 2002 in northwest Minnesota had normal temperatures (z-score of 0.34) and was extremely wet (z-score of 2.8). Statistical analyses can be performed using either the raw z-scores, or the categorical variables.

For every division and the four seasons and periods described above, we have provided data sets containing the raw temperature and precipitation values, the respective z-scores, and the descriptive categorizations of those z-scores. We provided these data sets to the LCCMR project members via an online wiki page, and have included the data sets in Appendix 1 of this document. All of the data were extracted using the online data retrieval tool described earlier. That tool will also enable users to select different periods (for example, just June and July, or December through February), and different spatial units, such as watersheds. We provided the data at the climatic division level for simplicity, with the understanding that other project participants were using the online tool to generate their own data sets to be used in conjunction with, or independently of, those that we provided.

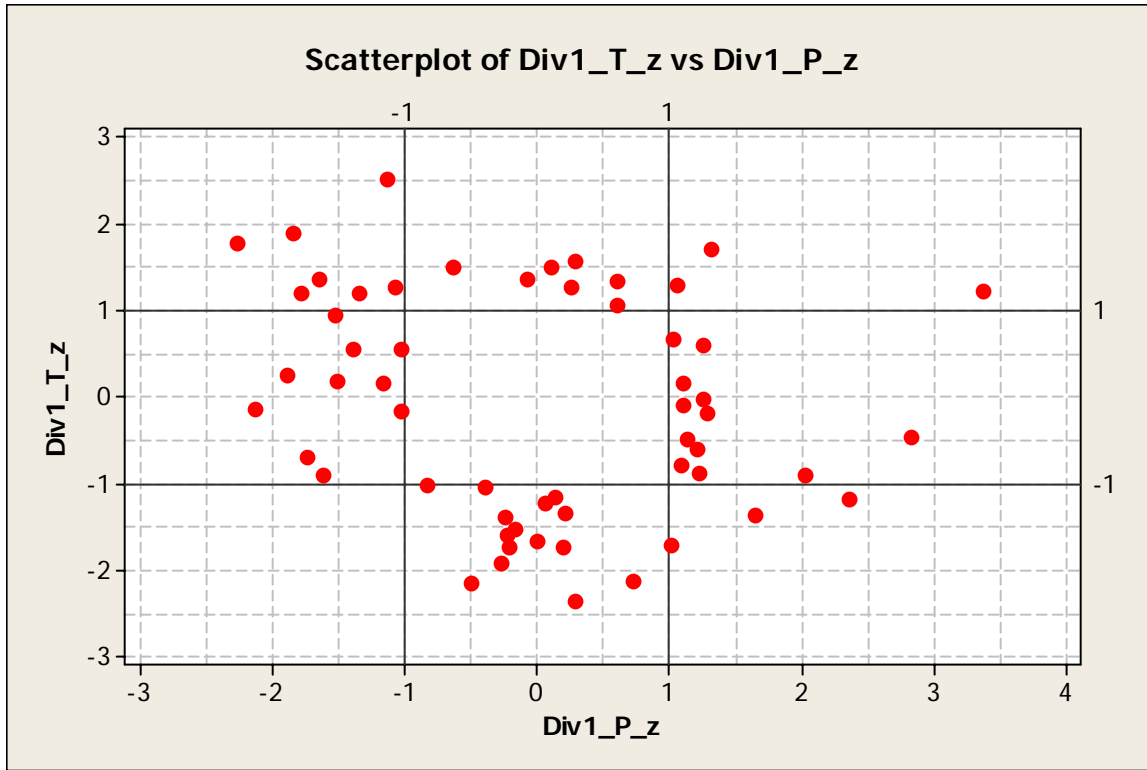
## Climatic Regimes (Episodes)

We have explored each of the data sets we created, looking for patterns in how temperature and precipitation characteristics combine to define “episodes” or “regimes” of climate. For instance, how frequently has a given division during a given season been simultaneously warm and wet? How common are warm and wet summers in northeastern Minnesota? To explore these questions, we created scatterplots of the temperature z-scores versus the precipitation z-scores, and plotted them in a way that ignores “normal-normal” years and that emphasizes years that are non-normal for temperature and/or precipitation. These scatterplots can be interpreted in accordance with the table given below.

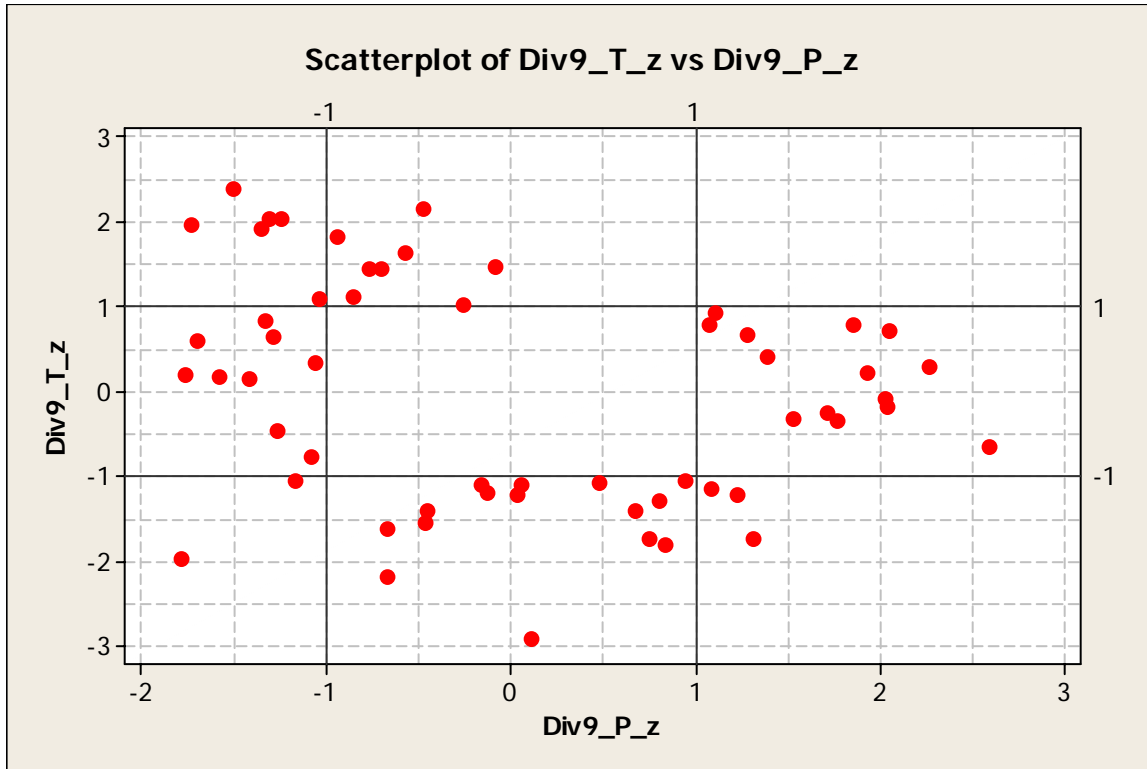
Temp $\geq 1$ z, Prec. $\leq -1$ z <b>WARM, DRY</b>	Temp $\geq 1$ z, $-1z < \text{Prec} < 1z$ <b>WARM, NORMAL</b>	Temp $\geq 1$ z, Prec $\geq 1$ z <b>WARM, WET</b>
$-1z < \text{Temp} < 1z$ , Prec. $\leq 1z$ <b>NORMAL, DRY</b>	$-1z < \text{Temp} < 1z$ , $-1z < \text{Prec} < 1z$ <b>NORMAL, NORMAL</b>	$1z < \text{Temp} < 1z$ , Prec $\geq 1$ z <b>NORMAL, WET</b>
Temp $\leq 1$ z, Prec. $\leq -1$ z <b>COOL, DRY</b>	Temp $\leq 1$ z, $-1z < \text{Prec} < 1z$ <b>COOL, NORMAL</b>	Temp $\leq 1$ z, Prec $\geq 1$ z <b>COOL, WET</b>

Here, as an example, we will look at meteorological summer, June through August (JJA), for climate divisions 1 and 9: the northwest and southeast, respectively. These are shown in Figures 6 and 7, below. Though the graphs are not identical, they both contain similar patterns (again, the years that are “normal-normal” have been omitted). In both cases, cool, dry summers are extremely rare. Dry summers are likely to be normal or warm, and cool summers most frequently normal for precipitation. Also, warm, wet summers are quite rare. Warm summers tend to be dry or normal, and wet summers tend to have normal, or even cool temperatures. These patterns were consistent throughout the state, for summers, aquatic growing seasons, and for water years. During winter periods, no clear relationships emerged, but also, the differences in the total quantity of water between “wet” and “dry” winters was much smaller than for summers.





**Figure 6. Scatterplot of temperature z-scores versus precipitation z-scores, for summer in northwestern Minnesota, with all seasons that were “normal” in both categories removed. Temperature increases with height on the graph, and precipitation increases from left to right.**

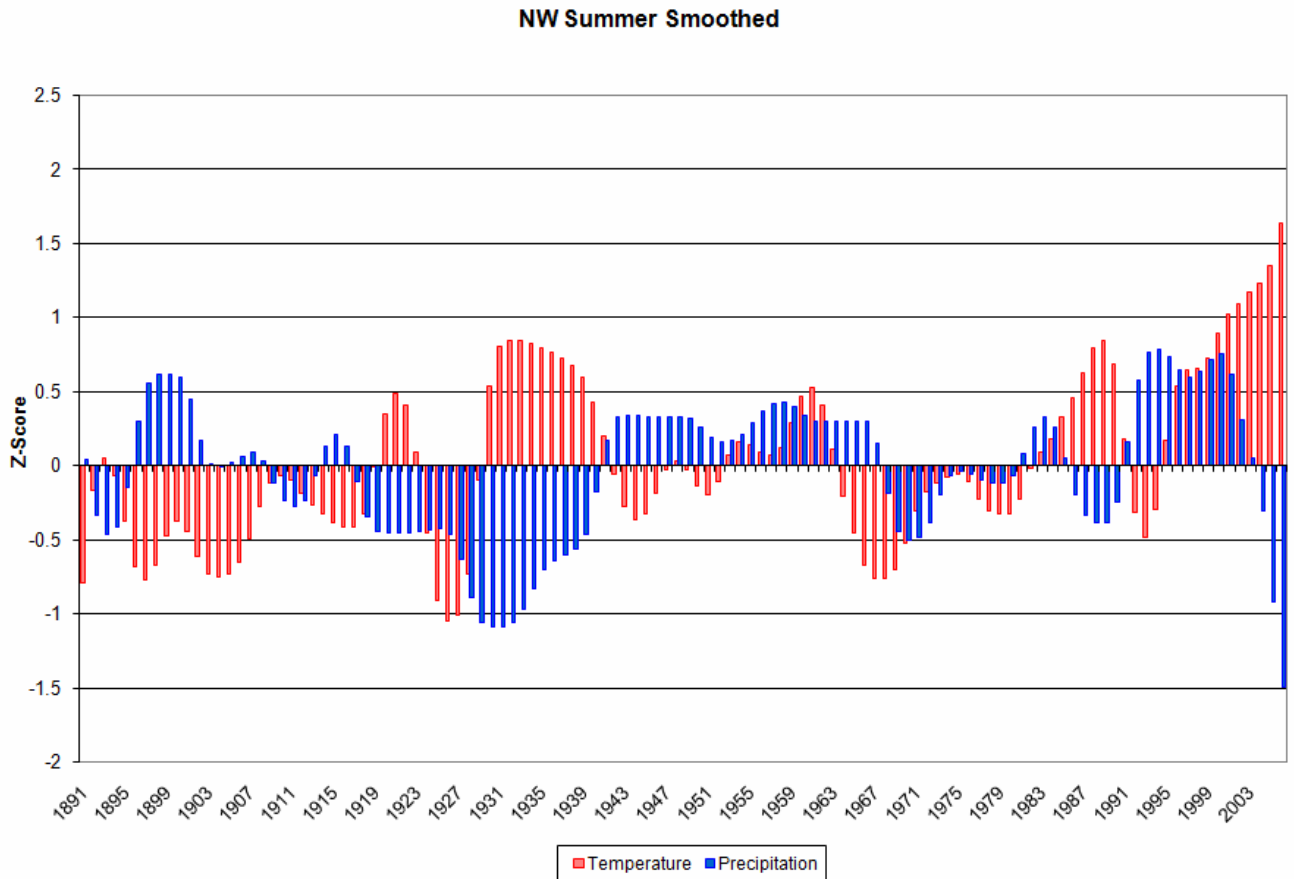


**Figure 7. Same as Figure 6, except for southeast Minnesota**

A problem with using the scatterplot approach is that it becomes difficult to see how patterns of “cool and wet,” for example, persist through time. One way to reveal any extended periods of generalized departures from the average is to decompose the data into “signal” and “noise”. There are a variety of methods to attempt the decomposition. Here we choose to use Exploratory Data Analysis (EDA) smoothing. This approach relies on repeated application of moving or running medians of differing lengths. The median is used because it eliminates exceptionally large or small observed data without being substantially affected. In contrast, moving or running averages, another very popular smoothing method, are greatly affected by large “outliers”, both positive and negative. A common and effective EDA smoother is the 4253H smoother. The data are successively smoothed by moving medians of lengths of 4 then 2 then 5 and then 3. This filter eliminates outliers while maintaining data centered on the observation times. The process is then finished (polished) by applying a three term moving average with weights of .25, .5, and .25 (Hanning).

Climatological divisions at the four corners of the state (NW, NE, SW, SE) were selected for this analysis. Two seasons are analyzed: June through August (traditional summer) and May through October (recommended by the biologists cooperating on the project). For each division and season the average temperature and total precipitation observed data were standardized, i.e., converted to z-scores by subtracting the mean and dividing by the standard deviation. The time series of z-scores were then smoothed with the 4253H smoother. The resulting smoothed time series are shown in Figures 8 through 15, two diagrams for each of the four divisions. In the graphs, the time series of the smoothed temperature z-scores and smoothed precipitation z-scores are plotted as a function of year from 1891 through 2006. Positive z-scores indicated positive departures from the long term mean and negative z-scores mean the converse.

The first thing to note is all divisions have differences between the smoothed z-scores of the summer season and the May through October season. This implies at least some intraseasonal variability. In other words, a pattern of temperature and/or precipitation departures in a season tend to persist but there are month to month fluctuations that occasionally are substantial. In the SE division, there are differences between the summer and the May through October season. The differences are strongest in the precipitation departures. In the early part of the record (1899 through 1910 approximately) the positive precipitation departures are much more pronounced in the May through October season. This implies that the early and late parts of the growing season were wetter. Conversely, the negative precipitation departures during the May through October season during the late 1940s and 1950s are not matched during the summer season. In the SW division, the early century positive precipitation departures are quite similar between the summer and the May through October period. But the negative temperature departures are stronger and extend for a long period in the May through October season. The NW division has notable reversals of the sign of precipitation departures between the summer and the May through October seasons. Between about 1940 and 1970 there are small positive precipitation departures in the summer but sometimes substantial negative precipitation departures in the May through October season. The NW division has, in common with the SE and NE divisions, stronger positive precipitation departures in the early part of the 20<sup>th</sup> century.



**Figure 8. Smoothed z-scores for temperature (red) and precipitation (blue) during summer in northwest Minnesota.**

### NE Summer Smoothed

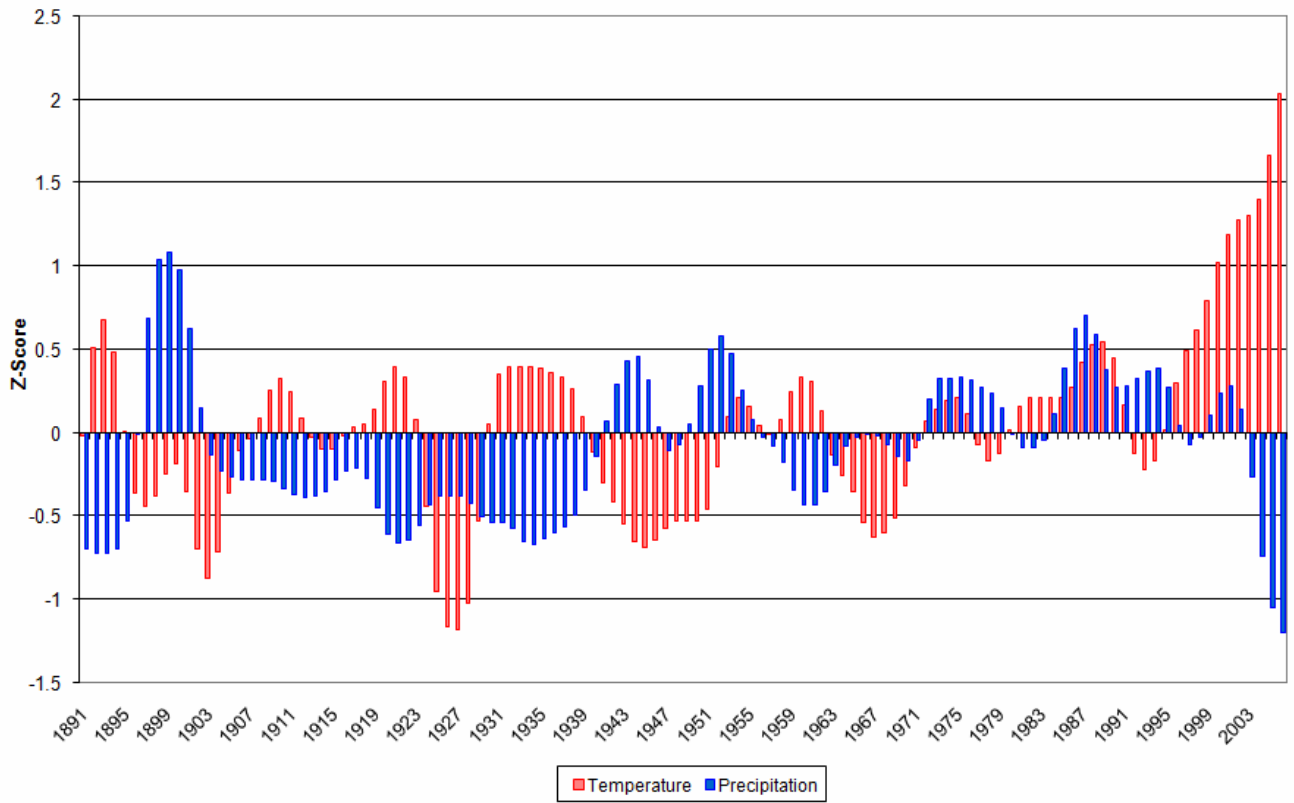


Figure 9. Same as above, except for the northeast.

### SW Summer Smoothed

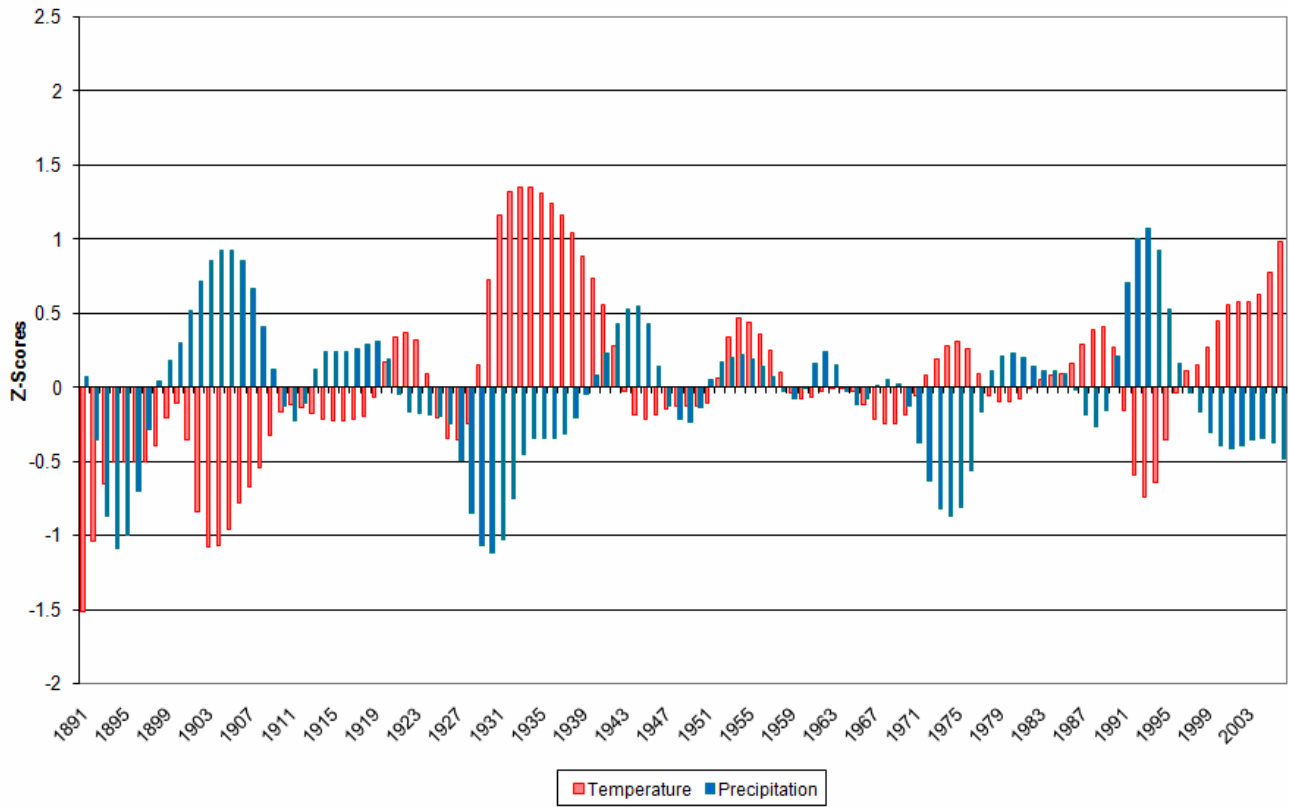


Figure 10. Same as above, except for the southwest.

### SE Summer Smoothed

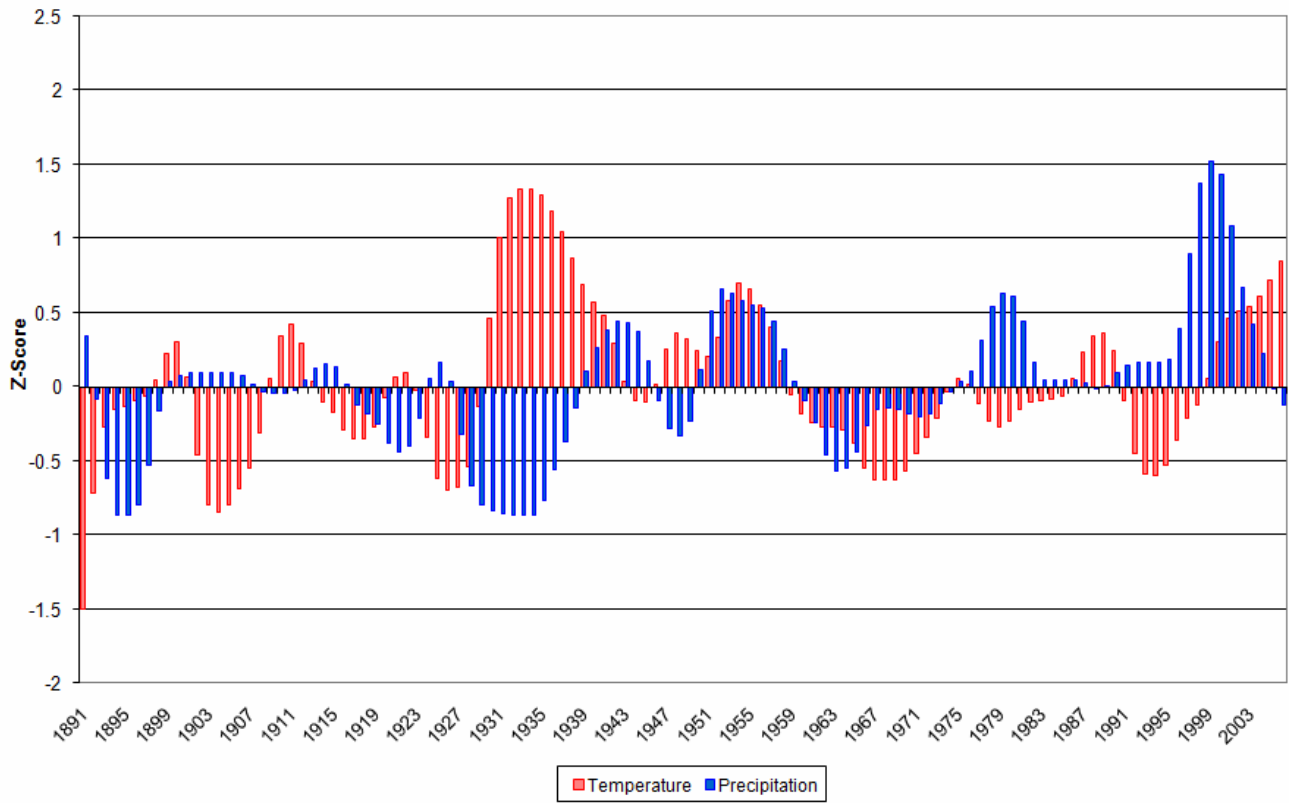


Figure 11. Same as above, except for the southeast.

NW May - October Smoothed

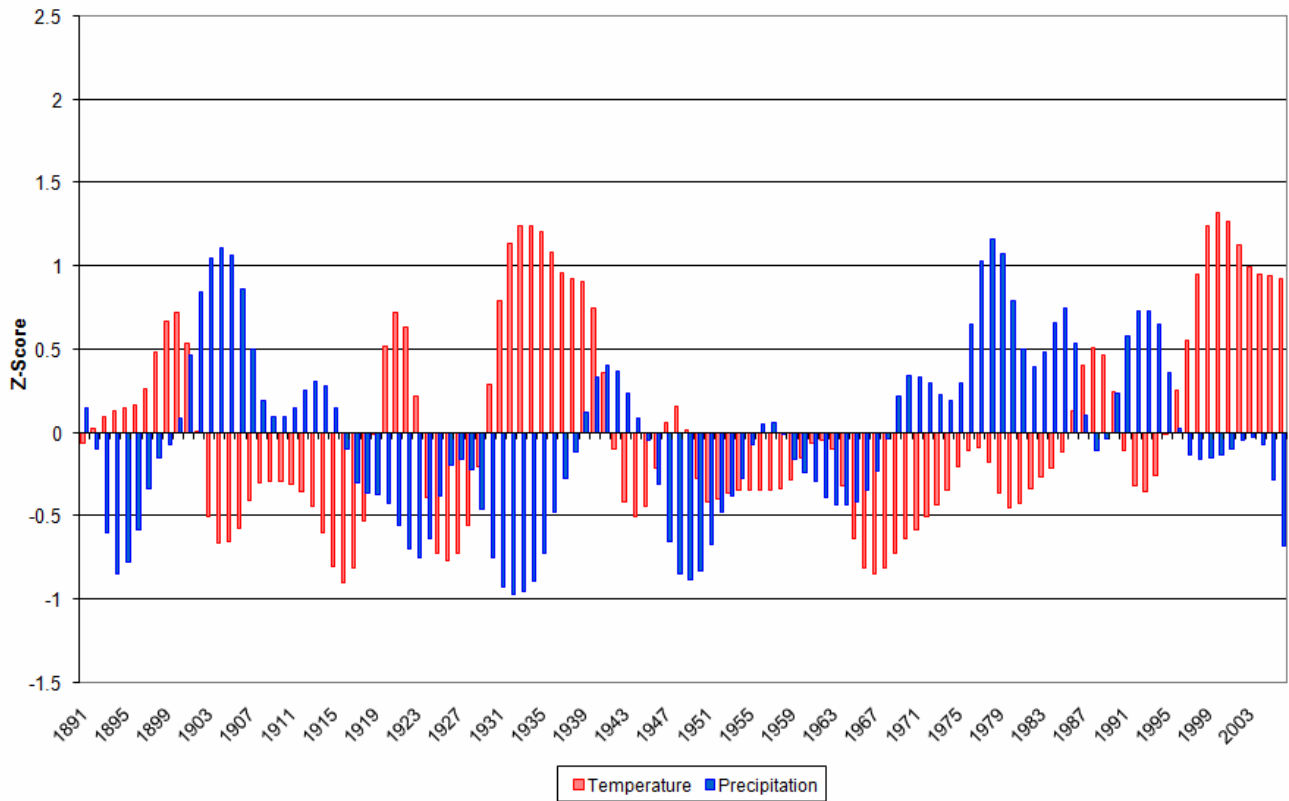


Figure 12. Same as above, except for the May-October aquatic growing season, and for the northwest.

### NE May - October Smoothed

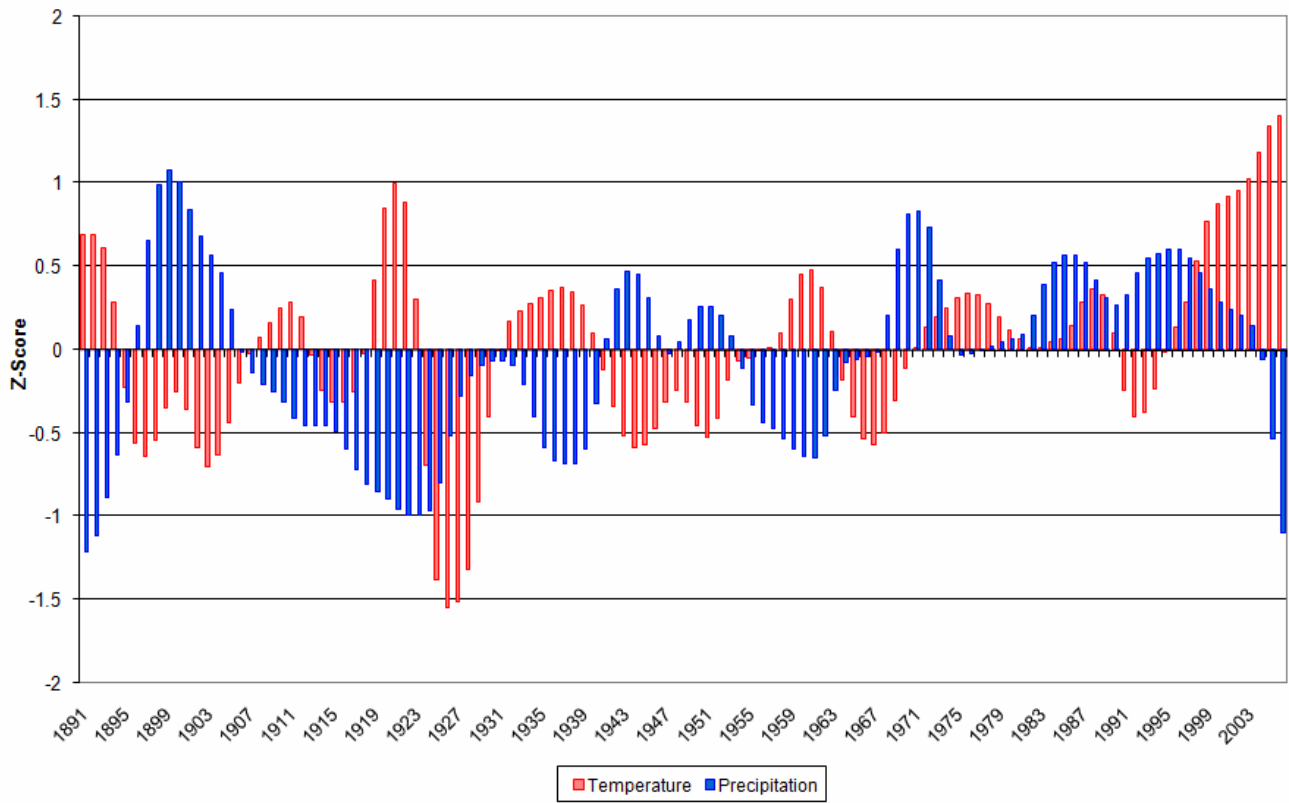


Figure 13. Same as above, except for the northeast.



### SW May - October Smoothed

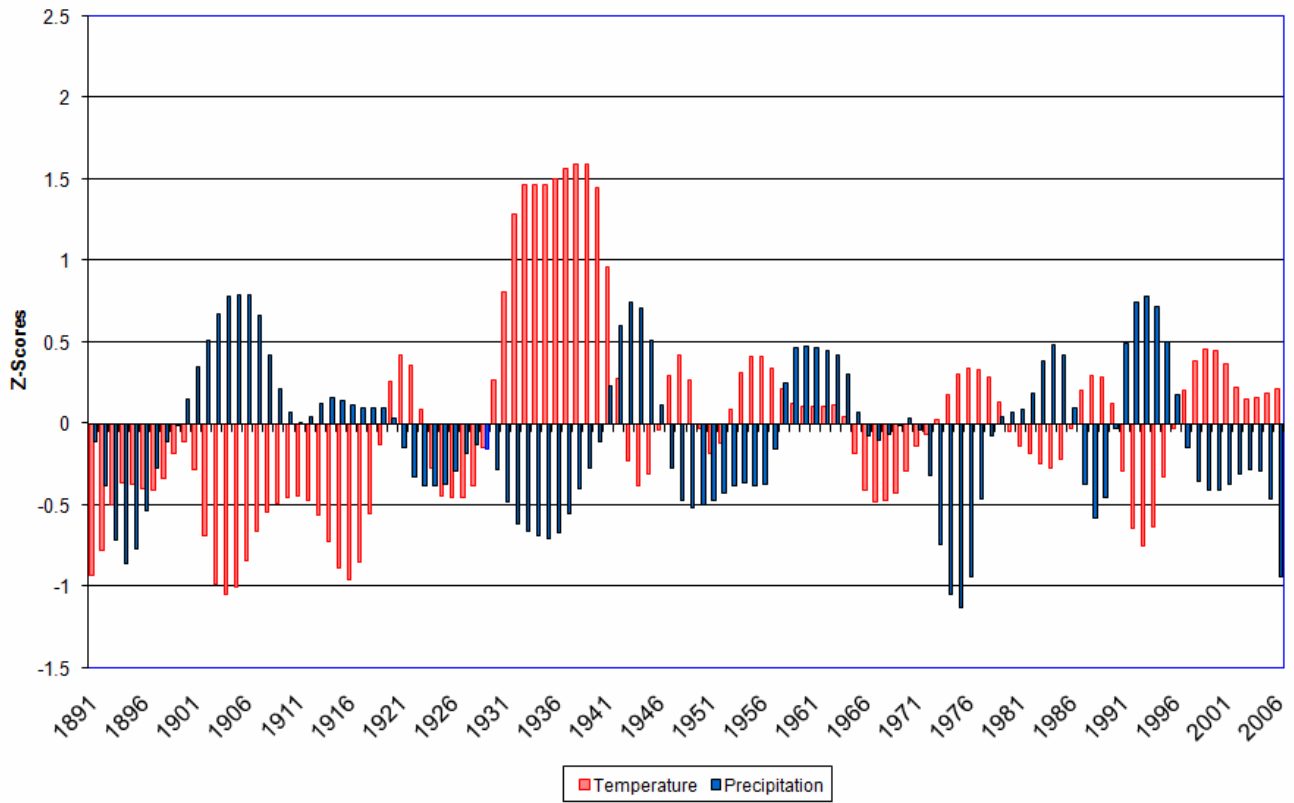


Figure 14. Same as above, except for the southwest.

### SE May - October Smoothed

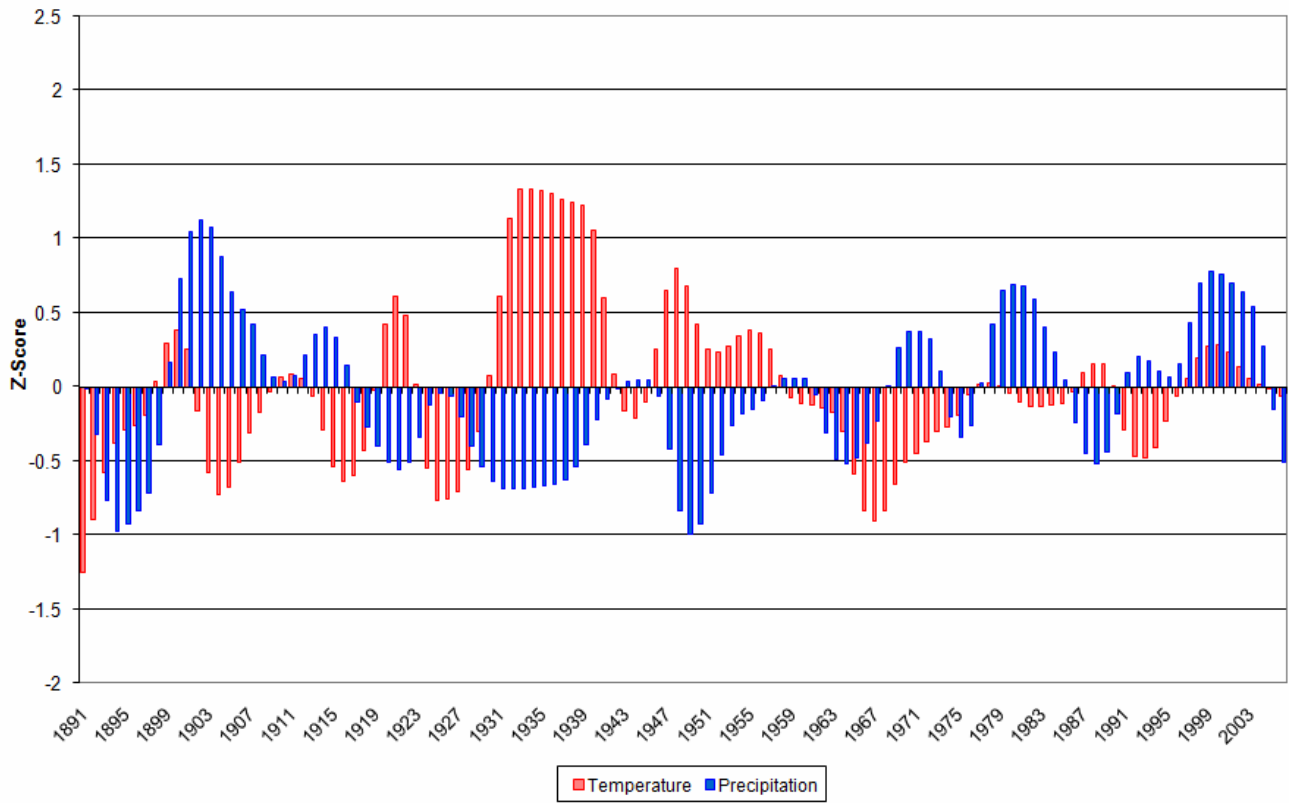


Figure 15. Same as above, except for the southeast.

Appendix 1: Data Tables

Key

<u>Variable Name</u>	<u>Meaning</u>
<b>[division]_T</b>	Average temperature, November-March for representative grid cell within division
<b>[division]_P</b>	Total precipitation, November-March for representative grid cell within division
<b>[division]_Tz</b>	Z-score (number of standard deviations from mean) for corresponding value of [division]_T
<b>[division]_Pz</b>	Z-score (number of standard deviations from mean) for corresponding value of [division]_P
<b>T_class</b>	Classification of temps based on Z-score: $\leq -2$ extremely cool, $\leq -1.5$ very cool, $\leq -1$ cool, $> -1$ to $< 1$ normal, $\geq 1$ warm, $\geq 1.5$ very warm, $\geq 2$ extremely warm
<b>P_class</b>	Classification of precip based on Z-score: $\leq -2$ extremely dry, $\leq -1.5$ very dry, $\leq -1$ dry, $> -1$ to $< 1$ normal, $\geq 1$ wet, $\geq 1.5$ very wet, $\geq 2$ extremely wet

May-October: Northwest MN

<u>YEAR</u>	<u>NW T</u>	<u>NW P</u>	<u>NW Tz</u>	<u>NW Pz</u>	<u>T_class</u>	<u>P_class</u>
1891	62.053	14.66	-0.03128	-1.28143	normal	dry
1892	61.95	28.85	-0.09253	1.581874	normal	very wet
1893	62.72	15.23	0.36536	-1.16641	normal	dry
1894	64.593	14.02	1.47916	-1.41057	warm	dry
1895	61.79	17	-0.18768	-0.80926	normal	normal
1896	61.653	18.11	-0.26914	-0.58528	normal	normal
1897	63.383	22.18	0.75962	0.235981	normal	normal
1898	62.382	19.51	0.164364	-0.30278	normal	normal
1899	63.035	20.34	0.552678	-0.1353	normal	normal
					ext.	
1900	65.927	27.66	2.272437	1.341752	warm	wet
1901	64.333	17.71	1.324548	-0.66599	warm	normal
1902	61.617	23.22	-0.29055	0.445835	normal	normal
1903	60.727	30.36	-0.8198	1.886566	normal	very wet
1904	60.282	27.22	-1.08442	1.252967	cool	wet
1905	60.932	28.48	-0.69789	1.507214	normal	very wet
1906	61.953	25.57	-0.09075	0.920025	normal	normal
					very	
1907	58.935	20.75	-1.88543	-0.05257	cool	normal
1908	62.098	23.86	-0.00452	0.574976	normal	normal
1909	61.227	20.16	-0.52247	-0.17162	normal	normal
1910	62.285	9.64	0.106682	-2.29438	normal	ext. dry

1911	61.783	29.68	-0.19184	1.749353	normal	very wet
1912	60.855	21.78	-0.74368	0.155268	normal	normal
1913	61.405	22.41	-0.41662	0.282391	normal	normal
1914	63.282	24.6	0.699559	0.724296	normal	normal
					ext.	
1915	58.6	22.71	-2.08464	0.342926	cool	normal
1916	61.205	20.19	-0.53555	-0.16557	normal	normal
					ext.	
1917	58.13	18.06	-2.36413	-0.59537	cool	normal
1918	60.753	18.63	-0.80434	-0.48035	normal	normal
1919	61.882	19.43	-0.13297	-0.31892	normal	normal
1920	63.423	20.99	0.783406	-0.00414	normal	normal
					very	
1921	65.142	19.36	1.805629	-0.33305	warm	normal
1922	64.562	15.28	1.460725	-1.15632	warm	dry
1923	63.022	15.26	0.544947	-1.16036	normal	dry
1924	59.92	20.87	-1.29969	-0.02835	cool	normal
1925	60.27	16.05	-1.09156	-1.00095	cool	dry
1926	60.965	20.65	-0.67827	-0.07275	normal	normal
1927	60.285	20.66	-1.08264	-0.07073	cool	normal
1928	61.207	22.3	-0.53436	0.260195	normal	normal
1929	61.08	16.82	-0.60988	-0.84558	normal	normal
1930	63.29	19.04	0.704316	-0.39762	normal	normal
					very	
1931	64.897	15.42	1.659937	-1.12807	warm	dry
1932	62.668	13.82	0.334437	-1.45093	normal	dry
					very	
1933	64.648	16.35	1.511866	-0.94041	warm	normal
					very	
1934	64.858	16.74	1.636745	-0.86172	warm	normal
1935	61.833	20.36	-0.1621	-0.13126	normal	normal
					very	
1936	64.89	9.13	1.655774	-2.39729	warm	ext. dry
1937	63.595	19.05	0.885688	-0.3956	normal	normal
1938	63.62	27.3	0.900555	1.26911	normal	wet
1939	63.807	21.1	1.011756	0.018055	warm	normal
1940	62.952	16.51	0.503321	-0.90813	normal	normal
1941	64.088	25.74	1.178856	0.954328	warm	normal
1942	60.073	25.87	-1.20871	0.98056	cool	normal
1943	61.16	19.49	-0.56231	-0.30682	normal	normal
1944	62.33	21.28	0.133442	0.054376	normal	normal
					ext.	
1945	58.27	21.02	-2.28088	0.001913	cool	normal
1946	60.772	22.74	-0.79304	0.348979	normal	normal
1947	62.888	15.41	0.465263	-1.13009	normal	dry
1948	62.985	13.2	0.522945	-1.57603	normal	very dry
1949	63.308	17.72	0.71502	-0.66397	normal	normal
1950	60.955	13.87	-0.68422	-1.44084	normal	dry
1951	59.817	28.09	-1.36094	1.428518	cool	wet
1952	60.752	17.33	-0.80493	-0.74267	normal	normal
1953	63.753	18.37	0.979644	-0.53281	normal	normal
1954	60.798	21.37	-0.77758	0.072537	normal	normal
					very	
1955	64.733	18.66	1.562412	-0.4743	warm	normal

1956	62.313	22.68	0.123333	0.336872	normal	normal
1957	60.537	26.78	-0.93279	1.164183	normal	wet
1958	60.72	16.52	-0.82396	-0.90611	normal	normal
1959	61.685	22.22	-0.25011	0.244052	normal	normal
1960	62.128	20.32	0.01332	-0.13934	normal	normal
1961	62.212	16.22	0.063272	-0.96665	normal	normal
1962	61.578	24.81	-0.31374	0.76667	normal	normal
1963	64.28	16.26	1.293031	-0.95857	warm	normal
1964	62.255	17.26	0.088842	-0.75679	normal	normal
1965	59.998	27.85	-1.25331	1.380091	cool	wet
1966	60.655	16.22	-0.86262	-0.96665	normal	normal
					very	
1967	59.113	18.05	-1.77958	-0.59738	cool	normal
1968	60.753	27.99	-0.80434	1.40834	normal	wet
1969	60.675	11.42	-0.85072	-1.9352	normal	very dry
1970	62.1	24.19	-0.00333	0.641565	normal	normal
1971	61.46	24.38	-0.38391	0.679903	normal	normal
1972	60.147	21.36	-1.1647	0.070519	cool	normal
1973	62.028	22.58	-0.04615	0.316694	normal	normal
1974	59.905	16.7	-1.30861	-0.86979	cool	normal
1975	62.27	25.81	0.097762	0.968453	normal	normal
1976	61.542	9.51	-0.33515	-2.32061	normal	ext. dry
1977	62.588	28.49	0.286864	1.509232	normal	very wet
1978	62.487	28.24	0.226804	1.458786	normal	wet
1979	59.987	26	-1.25985	1.006792	cool	wet
1980	61.325	26.47	-0.46419	1.10163	normal	wet
1981	60.258	21.66	-1.0987	0.131054	cool	normal
1982	61.585	20.21	-0.30958	-0.16153	normal	normal
1983	62.453	21.88	0.206585	0.175446	normal	normal
1984	61.777	26.58	-0.19541	1.123826	normal	wet
1985	60.515	26.59	-0.94587	1.125844	normal	wet
1986	61.88	28.05	-0.13416	1.420447	normal	wet
1987	63.54	19.19	0.852982	-0.36735	normal	normal
					very	
1988	65.202	17.05	1.841308	-0.79917	warm	normal
1989	62.903	16.46	0.474183	-0.91822	normal	normal
1990	62.248	27.01	0.08468	1.210593	normal	wet
1991	62.77	27.61	0.395093	1.331663	normal	wet
1992	59.878	16.51	-1.32467	-0.90813	cool	normal
					very	
1993	59.58	27.91	-1.50188	1.392197	cool	wet
1994	62.805	21.57	0.415906	0.112893	normal	normal
1995	62.5	29.42	0.234534	1.69689	normal	very wet
1996	61.165	18.68	-0.55934	-0.47026	normal	normal
1997	62.582	20.8	0.283296	-0.04248	normal	normal
					ext.	
1998	65.548	19.7	2.047061	-0.26444	warm	normal
1999	63.927	23.74	1.083115	0.550762	warm	normal
					very	
2000	64.787	17.47	1.594524	-0.71442	warm	normal
					very	
2001	64.777	19.04	1.588577	-0.39762	warm	normal
2002	62.683	35.03	0.343357	2.828893	normal	ext. wet
2003	63.848	20.04	1.036137	-0.19583	warm	normal

2004	63.508	24.52	0.833953	0.708153	normal very	normal
2005	65.298	25.92	1.898396	0.990649	warm	normal
2006	63.663	17.68	0.926125	-0.67204	normal	normal

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## May-October: North-central MN

<u>YEAR</u>	<u>NC T</u>	<u>NC P</u>	<u>NC Tz</u>	<u>NC Pz</u>	<u>T class</u>	<u>P class</u>
1891	55.633	18.64	-0.91505	-0.01597	normal	normal
1892	56.765	13.36	-0.14455	-1.45495	normal	dry
1893	56.403	16.67	-0.39095	-0.55286	normal	normal
1894	58.187	14.49	0.823329	-1.14698	normal ext.	dry
1895	53.825	20.15	-2.14566	0.395551	cool	normal
1896	55.547	20.2	-0.97358	0.409178	normal	normal
1897	56.973	18.37	-0.00298	-0.08956	normal	normal
1898	54.865	21.62	-1.43778	0.796174	cool	normal
1899	55.945	25.11	-0.70268	1.747313	normal ext.	very wet
1900	59.92	26.49	2.002892	2.123408	warm	ext. wet
1901	58.552	21.86	1.071766	0.861582	warm	normal
1902	56.153	19.27	-0.56111	0.155723	normal	normal
1903	56.097	20.55	-0.59922	0.504565	normal	normal
1904	55.495	16.38	-1.00897	-0.6319	cool	normal
1905	56.337	27.97	-0.43587	2.526757	normal	ext. wet
1906	57.455	18.35	0.325095	-0.09501	normal ext.	normal
1907	53.777	17.1	-2.17833	-0.43567	cool	normal
1908	56.568	17.81	-0.27864	-0.24217	normal	normal
1909	57.31	20.62	0.226401	0.523642	normal	normal
1910	57.892	10.78	0.622538	-2.15808	normal	ext. dry
1911	57.182	17.49	0.139278	-0.32939	normal	normal
1912	56.397	16.64	-0.39503	-0.56104	normal	normal
1913	55.942	20.55	-0.70472	0.504565	normal very	normal
1914	59.187	21.75	1.503977	0.831604	warm	normal
1915	54.983	20.28	-1.35747	0.430981	cool	normal
1916	56.337	20.07	-0.43587	0.373749	normal very	normal
1917	54.258	10.6	-1.85094	-2.20714	cool	ext. dry
1918	55.753	14.62	-0.83337	-1.11155	normal	dry
1919	57.067	23.07	0.061004	1.191347	normal	wet
1920	58.857	15.92	1.279363	-0.75726	warm very	normal
1921	59.498	15.79	1.715659	-0.79269	warm very	normal
1922	59.523	13.93	1.732675	-1.2996	warm	dry
1923	58.437	12.85	0.993491	-1.59394	normal very	very dry
1924	54.772	16.19	-1.50108	-0.68368	cool very	normal
1925	54.442	18.66	-1.7257	-0.01052	cool very	normal
1926	54.698	18.92	-1.55145	0.060336	cool	normal
1927	55.423	16.94	-1.05798	-0.47928	cool	normal
1928	55.59	20.96	-0.94431	0.616303	normal	normal
1929	56.08	11.63	-0.6108	-1.92643	normal	very dry
1930	57.705	13.59	0.495257	-1.39226	normal very	dry
1931	59.675	16.45	1.836133	-0.61282	warm	normal

1932	57.395	15.95	0.284256	-0.74909	normal	normal
1933	58.607	12.5	1.109201	-1.68932	warm	very dry
1934	57.603	15.2	0.425831	-0.95349	normal	normal
1935	56.182	18.57	-0.54137	-0.03505	normal	normal
1936	58.127	10.16	0.78249	-2.32705	normal	ext. dry
1937	57.948	21.57	0.660654	0.782548	normal	normal
1938	58.535	14.78	1.060195	-1.06795	warm	dry
1939	57.802	17.68	0.56128	-0.2776	normal	normal
1940	57.643	13.06	0.453057	-1.5367	normal	very dry
1941	58.94	22.45	1.335857	1.022377	warm	wet
1942	55.363	19.96	-1.09882	0.34377	cool	normal
1943	57.2	18.98	0.15153	0.076688	normal	normal
1944	57.765	26.05	0.536096	2.003494	normal	ext. wet
					very	
1945	54.153	15.67	-1.9224	-0.82539	cool	normal
1946	55.977	19.21	-0.6809	0.139371	normal	normal
1947	58.082	19.1	0.751861	0.109392	normal	normal
1948	58.57	12.6	1.084017	-1.66207	warm	very dry
1949	58.037	24.91	0.721232	1.692807	normal	very wet
1950	55.745	20.77	-0.83881	0.564522	normal	normal
1951	55.523	18.88	-0.98992	0.049435	normal	normal
1952	56.788	15.78	-0.1289	-0.79542	normal	normal
1953	58.593	22.76	1.099672	1.106862	warm	wet
1954	55.545	14.44	-0.97494	-1.16061	normal	dry
					very	
1955	59.662	17.76	1.827285	-0.2558	warm	normal
1956	56.808	14.22	-0.11528	-1.22057	normal	dry
1957	56.782	19.81	-0.13298	0.30289	normal	normal
1958	56.022	15.66	-0.65027	-0.82812	normal	normal
1959	57.433	21.74	0.310121	0.828878	normal	normal
1960	57.09	16.09	0.076659	-0.71093	normal	normal
1961	57.465	16.68	0.331902	-0.55014	normal	normal
1962	56.597	24.15	-0.2589	1.485682	normal	wet
					very	
1963	59.555	16.92	1.754455	-0.48473	warm	normal
1964	56.372	20.8	-0.41205	0.572698	normal	normal
					very	
1965	54.695	22.33	-1.55349	0.989673	cool	normal
1966	56.177	17.89	-0.54477	-0.22037	normal	normal
1967	54.872	11.97	-1.43302	-1.83377	cool	very dry
1968	55.848	23.05	-0.76871	1.185896	normal	wet
1969	55.372	20.78	-1.09269	0.567247	cool	normal
1970	57.582	16.22	0.411537	-0.6755	normal	normal
1971	56.76	21.59	-0.14796	0.787998	normal	normal
1972	56.09	19.09	-0.60399	0.106667	normal	normal
1973	57.898	23.14	0.626622	1.210424	normal	wet
1974	55.553	17.86	-0.9695	-0.22855	normal	normal
1975	57.632	18.7	0.44557	0.000379	normal	normal
1976	57.073	12.26	0.065088	-1.75473	normal	very dry
1977	58.18	23.18	0.818565	1.221325	normal	wet
1978	58.097	20.83	0.762071	0.580874	normal	normal
					very	
1979	54.598	17.11	-1.61952	-0.43295	cool	normal
1980	56.783	15.9	-0.1323	-0.76271	normal	normal



1981	56.662	21.82	-0.21466	0.850681	normal	normal
1982	56.9	21.05	-0.05266	0.640831	normal	normal
1983	58.262	20.91	0.874378	0.602676	normal	normal
1984	57.467	19.91	0.333263	0.330144	normal	normal
1985	55.48	23.56	-1.01918	1.324888	cool	wet
1986	57.202	17.86	0.152891	-0.22855	normal	normal
1987	58.098	18.92	0.762752	0.060336	normal	normal
					very	
1988	59.462	18.3	1.691155	-0.10863	warm	normal
1989	58.347	18.76	0.932233	0.016731	normal	normal
1990	57.532	14.44	0.377505	-1.16061	normal	dry
1991	58.352	21	0.935636	0.627204	normal	normal
1992	55.027	17.19	-1.32752	-0.41115	cool	normal
					very	
1993	54.523	20.88	-1.67056	0.5945	cool	normal
1994	58.245	21.76	0.862807	0.834329	normal	normal
1995	57.938	21.99	0.653848	0.897012	normal	normal
1996	57.042	19.71	0.043988	0.275637	normal	normal
1997	57.405	18.95	0.291063	0.068512	normal	normal
					very	
1998	59.8	20.64	1.921214	0.529092	warm	normal
1999	57.46	27.07	0.328498	2.281477	normal	ext. wet
2000	57.298	20.3	0.218233	0.436431	normal	normal
2001	58.728	21.32	1.19156	0.714415	warm	normal
2002	56.947	22.35	-0.02067	0.995123	normal	normal
2003	58.902	17.17	1.309992	-0.4166	warm	normal
2004	55.758	23.71	-0.82996	1.365768	normal	wet
2005	58.937	21.32	1.333815	0.714415	warm	normal
2006	58.697	13.34	1.17046	-1.4604	warm	dry

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## May-October: Northeast MN

<u>YEAR</u>	<u>NE T</u>	<u>NE P</u>	<u>NE Tz</u>	<u>NE Pz</u>	<u>T class</u>	<u>P class</u>
1891	55.067	16.31	-0.0265	-0.95999	normal	normal
1892	57.102	14.56	1.395454	-1.47926	warm	dry
1893	56.148	16.71	0.728849	-0.8413	normal	normal
1894	56.428	16.87	0.924498	-0.79383	normal	normal
1895	53.86	18.74	-0.86989	-0.23895	normal	normal
1896	53.862	19.29	-0.86849	-0.07576	normal	normal
1897	54.653	22.03	-0.31578	0.737271	normal	normal
1898	53.513	24.53	-1.11235	1.479082	cool	wet
1899	54.122	27.19	-0.68681	2.26837	normal	ext. wet
1900	57.155	23.59	1.432488	1.200161	warm	wet
1901	56.082	18.96	0.682731	-0.17367	normal	normal
1902	53.288	20.94	-1.26957	0.413841	cool	normal
1903	53.518	23.41	-1.10886	1.146751	cool	wet
1904	53.282	19.91	-1.27376	0.108214	cool	normal
1905	55.562	27.29	0.319382	2.298042	normal	ext. wet
1906	55.79	18.49	0.478697	-0.31313	normal	normal
1907	52.348	16.06	-1.92639	-1.03418	cool	dry
1908	54.963	19.86	-0.09917	0.093378	normal	normal
1909	55.253	24.28	0.103469	1.404901	normal	wet
1910	56.368	13.52	0.882573	-1.78786	normal	very dry
1911	55.817	19.02	0.497563	-0.15587	normal	normal
1912	55.203	17.01	0.068532	-0.75229	normal	normal
1913	53.875	20.24	-0.85941	0.206133	normal	normal
1914	57.493	16.39	1.668664	-0.93626	warm	normal
1915	53.488	18.87	-1.12982	-0.20038	cool	normal
1916	55.645	22.99	0.377378	1.022126	normal	wet
1917	52.832	16.12	-1.5882	-1.01637	cool	dry
1918	54.298	13.35	-0.56383	-1.8383	normal	very dry
1919	55.732	17.05	0.43817	-0.74042	normal	normal
1920	56.802	17.11	1.18583	-0.72261	warm	normal
1921	58.7	16.46	2.512053	-0.91549	warm	normal
1922	56.805	14.1	1.187926	-1.61576	warm	very dry
1923	56.757	14.97	1.154386	-1.35761	warm	dry
1924	52.403	16.53	-1.88796	-0.89472	cool	normal
1925	53.125	16.68	-1.38347	-0.85021	cool	normal
1926	52.293	21.98	-1.96482	0.722434	cool	normal
1927	52.638	16.31	-1.72376	-0.95999	cool	normal
1928	53.128	24.41	-1.38137	1.443475	cool	wet
1929	53.56	13.11	-1.07951	-1.90951	cool	very dry
1930	54.802	20.17	-0.21167	0.185363	normal	normal
1931	57.405	19.62	1.607175	0.022164	warm	normal
1932	55.057	19.83	-0.03349	0.084476	normal	normal
1933	56.07	18.19	0.674346	-0.40215	normal	normal

1934	55.322	16.39	0.151683	-0.93626	normal	normal
1935	54.01	20.34	-0.76507	0.235806	normal	normal
1936	55.698	12.21	0.414412	-2.17657	normal	ext. dry
1937	57.203	18.79	1.466027	-0.22412	warm	normal
1938	55.863	14.95	0.529705	-1.36354	normal	dry
1939	55.12	19.88	0.010536	0.099312	normal	normal
1940	55.087	15.21	-0.01252	-1.28639	normal	dry
1941	56.163	23.99	0.73933	1.318851	normal	wet
1942	53.505	18.52	-1.11794	-0.30423	cool	normal
1943	54.258	22.16	-0.59178	0.775845	normal	normal
1944	55.023	28.01	-0.05724	2.511684	normal	ext. wet
					ext.	
1945	52.1	18.93	-2.09968	-0.18258	cool	normal
1946	53.91	21.18	-0.83495	0.485055	normal	normal
1947	54.792	17.71	-0.21865	-0.54458	normal	normal
1948	56.593	12.93	1.039791	-1.96292	warm	very dry
1949	55.513	22.64	0.285144	0.918273	normal	normal
					very	
1950	52.89	21.27	-1.54767	0.51176	cool	normal
1951	53.543	21.21	-1.09139	0.493956	cool	normal
1952	54.79	17.93	-0.22005	-0.4793	normal	normal
1953	56.413	23.09	0.914017	1.051799	normal	wet
1954	54.023	16.02	-0.75599	-1.04604	normal	dry
					ext.	
1955	57.97	21.77	2.001967	0.660122	warm	normal
1956	54.95	14.75	-0.10825	-1.42289	normal	dry
1957	54.862	18.7	-0.16974	-0.25082	normal	normal
1958	54.348	17.34	-0.5289	-0.65437	normal	normal
1959	56.048	21.05	0.658974	0.44648	normal	normal
1960	55.797	15.66	0.483588	-1.15287	normal	dry
1961	56.22	16.67	0.779158	-0.85317	normal	normal
1962	54.738	18.68	-0.25639	-0.25676	normal	normal
					very	
1963	57.595	16.78	1.739937	-0.82053	warm	normal
1964	54.908	22.31	-0.1376	0.820353	normal	normal
1965	53.342	22.45	-1.23184	0.861895	cool	normal
1966	54.797	16.27	-0.21516	-0.97186	normal	normal
1967	53.472	15.83	-1.141	-1.10242	cool	dry
1968	54.645	25.04	-0.32137	1.630412	normal	very wet
1969	53.927	19.83	-0.82307	0.084476	normal	normal
1970	56.15	22.9	0.730246	0.995421	normal	normal
1971	55.537	22.89	0.301914	0.992454	normal	normal
1972	54.327	20.69	-0.54357	0.339659	normal	normal
1973	56.093	23.67	0.690417	1.223899	normal	wet
1974	53.557	19.82	-1.08161	0.081509	cool	normal
1975	56.02	17.32	0.639409	-0.6603	normal	normal
1976	55.36	12.88	0.178235	-1.97776	normal	very dry
1977	55.608	26.06	0.351525	1.933071	normal	very wet
1978	56.007	20.93	0.630325	0.410873	normal	normal
1979	53.382	19.12	-1.20389	-0.1262	cool	normal
1980	55.483	18.56	0.264181	-0.29236	normal	normal
1981	54.965	19.72	-0.09777	0.051837	normal	normal
1982	54.737	23.37	-0.25708	1.134882	normal	wet

1983	56.183	20.47	0.753305	0.27438	normal	normal
1984	55.562	18.54	0.319382	-0.2983	normal	normal
1985	53.553	23.78	-1.0844	1.256539	cool	wet
1986	54.512	21.65	-0.4143	0.624515	normal	normal
1987	56.195	21.61	0.76169	0.612646	normal	normal
1988	57.025	24.01	1.34165	1.324785	warm	wet
1989	55.565	17.89	0.321479	-0.49117	normal	normal
1990	54.775	19.06	-0.23053	-0.144	normal	normal
1991	55.785	22.06	0.475203	0.746172	normal	normal
1992	52.972	20.17	-1.49037	0.185363	cool	normal
					very	
1993	52.607	22.21	-1.74542	0.790681	cool	normal
1994	55.928	20.7	0.575124	0.342627	normal	normal
1995	55.608	22.23	0.351525	0.796615	normal	normal
1996	54.522	22.92	-0.40732	1.001356	normal	wet
1997	54.958	16	-0.10266	-1.05198	normal	dry
					ext.	
1998	58.585	20.62	2.431697	0.318889	warm	normal
1999	56.313	26.06	0.844142	1.933071	normal	very wet
2000	55.753	18.89	0.452843	-0.19444	normal	normal
2001	57.065	21.66	1.3696	0.627482	warm	normal
2002	55.923	20.28	0.57163	0.218002	normal	normal
2003	57.06	18.6	1.366107	-0.2805	warm	normal
2004	54.373	20.52	-0.51143	0.289216	normal	normal
					very	
2005	57.288	20.31	1.525421	0.226904	warm	normal
2006	57.107	15.83	1.398948	-1.10242	warm	dry

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## May-Oct: West-central MN

<u>YEAR</u>	<u>WC T</u>	<u>WC P</u>	<u>WC Tz</u>	<u>WC Pz</u>	<u>T class</u>	<u>P class</u>
1891	60.495	13.88	-0.29563	-1.02326	normal	dry
1892	59.193	19.33	-1.11645	0.455577	cool	normal
1893	60.035	14.02	-0.58563	-0.98527	normal	normal
1894	62.102	10.51	0.717467	-1.93769	normal	very dry
1895	58.972	14.91	-1.25578	-0.74377	cool	normal
1896	59.17	19.47	-1.13095	0.493566	cool	normal
1897	60.995	17.51	0.019582	-0.03827	normal	normal
1898	59.492	17.61	-0.92795	-0.01114	normal	normal
1899	59.762	22.84	-0.75774	1.408	normal	wet
1900	63.112	18.69	1.354201	0.281916	warm	normal
1901	61.823	15.85	0.541577	-0.48871	normal	normal
1902	58.473	15.76	-1.57036	-0.51313	cool	normal
1903	58.443	22.15	-1.58927	1.220772	cool	wet
1904	58.545	18.62	-1.52497	0.262922	cool	normal
1905	58.957	23.66	-1.26523	1.630504	cool	very wet
1906	60.27	25.11	-0.43748	2.023955	normal	ext. wet
1907	57.347	15.3	-2.28022	-0.63795	cool	normal
1908	60.322	20.97	-0.4047	0.900584	normal	normal
1909	60.378	17.01	-0.36939	-0.17394	normal	normal
1910	60.77	10.54	-0.12226	-1.92955	normal	very dry
1911	60.487	20.32	-0.30068	0.72421	normal	normal
1912	59.467	19.31	-0.94371	0.45015	normal	normal
1913	59.74	20.92	-0.77161	0.887017	normal	normal
1914	61.977	22.63	0.638663	1.351018	normal	wet
1915	57.46	22.78	-2.20899	1.39172	cool	wet
1916	59.667	21.63	-0.81763	1.079672	normal	wet
1917	57.762	11.06	-2.0186	-1.78845	cool	very dry
1918	60.203	13.88	-0.47972	-1.02326	normal	dry
1919	59.75	18.01	-0.7653	0.097401	normal	normal
1920	61.802	20.73	0.528338	0.835461	normal	normal
1921	63.252	17.22	1.442461	-0.11696	warm	normal
1922	63.512	9.65	1.606372	-2.17105	warm	ext. dry
1923	62.03	13.74	0.672076	-1.06124	normal	dry
1924	58.642	18.62	-1.46382	0.262922	cool	normal
1925	58.847	16.44	-1.33458	-0.32861	cool	normal
1926	59.75	17.57	-0.7653	-0.02199	normal	normal
1927	59.395	14.44	-0.98911	-0.8713	normal	normal
1928	59.983	18.06	-0.61841	0.110969	normal	normal
1929	59.743	14.47	-0.76972	-0.86316	normal	normal
1930	61.363	14.83	0.25158	-0.76548	normal	normal
1931	63.697	14.37	1.723002	-0.8903	warm	normal
1932	61.503	13.5	0.33984	-1.12637	normal	dry
1933	63.465	12.31	1.576742	-1.44927	very	dry

					warm	
					very	
1934	63.703	13.15	1.726784	-1.22134	warm	dry
1935	60.74	15.49	-0.14118	-0.58639	normal	normal
					very	
1936	63.98	8.7	1.901413	-2.42883	warm	ext. dry
1937	62.305	15.52	0.845444	-0.57825	normal	normal
1938	62.962	17.48	1.259636	-0.04641	warm	normal
1939	62.753	15.48	1.127876	-0.5891	warm	normal
1940	62.802	15.48	1.158768	-0.5891	warm	normal
1941	62.912	19.97	1.228115	0.629239	warm	normal
1942	58.945	23.1	-1.2728	1.47855	cool	wet
1943	60.775	20.18	-0.11911	0.686221	normal	normal
1944	61.853	20.27	0.56049	0.710642	normal	normal
1945	58.752	15.48	-1.39447	-0.5891	cool	normal
1946	59.937	22.18	-0.64741	1.228912	normal	wet
1947	62.357	14.57	0.878226	-0.83603	normal	normal
1948	62.573	15.81	1.014399	-0.49956	warm	normal
1949	62.533	18.26	0.989182	0.165238	normal	normal
1950	60.19	15.47	-0.48791	-0.59182	normal	normal
1951	58.963	19.93	-1.26145	0.618385	cool	normal
1952	61.167	15.59	0.128016	-0.55926	normal	normal
1953	62.613	19.23	1.039616	0.428443	warm	normal
1954	59.685	16.42	-0.80628	-0.33404	normal	normal
					very	
1955	63.652	18.22	1.694632	0.154384	warm	normal
1956	61.673	17.13	0.447013	-0.14138	normal	normal
1957	60.425	25.53	-0.33976	2.13792	normal	ext. wet
1958	60.737	13.01	-0.14307	-1.25933	normal	dry
1959	61.635	19.4	0.423056	0.474572	normal	normal
1960	61.54	17.57	0.363166	-0.02199	normal	normal
1961	61.3	15.61	0.211863	-0.55383	normal	normal
1962	60.705	24.45	-0.16324	1.844867	normal	very wet
					very	
1963	63.578	18.96	1.647981	0.35518	warm	normal
1964	61.652	14.96	0.433774	-0.7302	normal	normal
1965	59.503	24.15	-0.92102	1.763463	normal	very wet
1966	60.473	16.26	-0.3095	-0.37745	normal	normal
1967	58.7	12.4	-1.42725	-1.42485	cool	dry
1968	60.06	18.36	-0.56987	0.192372	normal	normal
1969	59.852	15.1	-0.701	-0.69221	normal	normal
1970	61.863	15.52	0.566794	-0.57825	normal	normal
1971	60.55	22.73	-0.26096	1.378152	normal	wet
1972	59.988	18.8	-0.61526	0.311764	normal	normal
1973	61.982	16.92	0.641815	-0.19837	normal	normal
1974	60.008	14.48	-0.60265	-0.86045	normal	normal
1975	61.897	16.39	0.588229	-0.34218	normal	normal
1976	61.953	6.7	0.623533	-2.97152	normal	ext. dry
1977	62.078	21.43	0.702337	1.025403	normal	wet
1978	62.24	16.27	0.804466	-0.37474	normal	normal
1979	59.425	18.6	-0.97019	0.257495	normal	normal
1980	61.1	15.79	0.085777	-0.50499	normal	normal
1981	60.285	18.8	-0.42802	0.311764	normal	normal

1982	60.468	19.86	-0.31265	0.599391	normal	normal
1983	61.99	17.64	0.646859	-0.003	normal	normal
1984	60.942	22.79	-0.01383	1.394433	normal	wet
1985	59.713	21.02	-0.78863	0.914151	normal	normal
1986	60.878	22.66	-0.05418	1.359158	normal	wet
1987	62.247	13.82	0.808879	-1.03954	normal ext.	dry
1988	64.345	14.15	2.13152	-0.94999	warm	normal
1989	61.985	16.4	0.643707	-0.33947	normal	normal
1990	61.2	18.41	0.14882	0.205939	normal	normal
1991	62.06	22.12	0.690989	1.212632	normal	wet
1992	58.797	15.47	-1.3661	-0.59182	cool very	normal
1993	58.497	23.49	-1.55523	1.584375	cool	very wet
1994	62.025	17.07	0.668924	-0.15766	normal	normal
1995	61.445	22.28	0.303275	1.256047	normal	wet
1996	60.838	17.75	-0.0794	0.026851	normal	normal
1997	62.363	16.53	0.882009	-0.30419	normal ext.	normal
1998	64.245	20.55	2.068477	0.786619	warm	normal
1999	62.28	20.45	0.829683	0.759484	normal	normal
2000	62.183	16.24	0.768532	-0.38288	normal	normal
2001	62.807	17.27	1.16192	-0.10339	warm	normal
2002	61.358	19.31	0.248428	0.45015	normal	normal
2003	62.355	15.24	0.876966	-0.65423	normal	normal
2004	59.712	24.24	-0.78926	1.787884	normal	very wet
2005	62.613	23.58	1.039616	1.608796	warm	very wet
2006	61.727	15.86	0.481056	-0.48599	normal	normal

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<u>YEAR</u>	<u>C T</u>	<u>C P</u>	<u>C Tz</u>	<u>C Pz</u>	<u>T class</u>	<u>P class</u>
1891	60.448	14.7	-0.36194	-1.17741	normal	dry
1892	59.178	23.69	-1.18233	1.019742	cool	wet
1893	60.477	13.12	-0.34321	-1.56356	normal	very dry
1894	62.345	12.46	0.863483	-1.72487	normal	very dry
1895	59.592	16.59	-0.9149	-0.7155	normal	normal
1896	59.527	18.15	-0.95689	-0.33423	normal	normal
1897	60.48	21.42	-0.34127	0.464954	normal	normal
1898	59.85	19.41	-0.74824	-0.02629	normal	normal
1899	60.042	21.91	-0.62421	0.58471	normal	normal
					very	
1900	63.707	22.26	1.743307	0.67025	warm	normal
1901	62.03	15.68	0.66	-0.9379	normal	normal
					very	
1902	58.58	18.98	-1.56863	-0.13138	cool	normal
					very	
1903	58.593	25.92	-1.56023	1.564753	cool	very wet
					very	
1904	58.307	21.29	-1.74498	0.433182	cool	normal
					very	
1905	58.645	26.33	-1.52664	1.664957	cool	very wet
1906	60.54	26.39	-0.30251	1.679621	normal	very wet
					ext.	
1907	57.843	17.84	-2.04472	-0.41	cool	normal
1908	60.782	21.84	-0.14618	0.567602	normal	normal
1909	60.453	17.33	-0.35871	-0.53464	normal	normal
1910	61.695	9.43	0.443597	-2.4654	normal	ext. dry
1911	60.947	23.74	-0.0396	1.031962	normal	wet
1912	60.315	19.96	-0.44785	0.108131	normal	normal
1913	60.67	23.69	-0.21853	1.019742	normal	wet
1914	62.78	23.43	1.144484	0.956198	warm	normal
					very	
1915	57.955	21.97	-1.97237	0.599374	cool	normal
1916	60.23	22.81	-0.50276	0.80467	normal	normal
					ext.	
1917	57.712	14.22	-2.12934	-1.29472	cool	dry
1918	60.355	16.49	-0.42202	-0.73994	normal	normal
1919	60.688	17.64	-0.2069	-0.45888	normal	normal
1920	62.467	19.99	0.942293	0.115463	normal	normal
					very	
1921	63.59	16.55	1.667728	-0.72527	warm	normal
					very	
1922	63.567	10.89	1.65287	-2.10857	warm	ext. dry
1923	62.018	13.64	0.652248	-1.43647	normal	dry
1924	58.875	19.83	-1.37806	0.076359	cool	normal
1925	59.09	16.58	-1.23918	-0.71794	cool	normal
1926	60.1	21.79	-0.58674	0.555382	normal	normal
1927	59.367	15.8	-1.06024	-0.90857	cool	normal
1928	60.28	20.09	-0.47046	0.139903	normal	normal
1929	60.095	16.02	-0.58997	-0.8548	normal	normal
1930	61.878	16.68	0.561811	-0.6935	normal	normal
					ext.	
1931	64.11	14.66	2.003637	-1.18719	warm	dry



1932	61.723	14.79	0.461684	-1.15542	normal	dry
					very	
1933	63.66	14.45	1.712946	-1.23851	warm	dry
					very	
1934	63.618	15.84	1.685815	-0.8988	warm	normal
1935	60.83	19.07	-0.11518	-0.10938	normal	normal
					very	
1936	63.568	10.74	1.653516	-2.14523	warm	ext. dry
1937	62.165	18.28	0.747207	-0.30246	normal	normal
1938	62.537	20.84	0.987511	0.323203	normal	normal
1939	62.518	18.35	0.975238	-0.28535	normal	normal
1940	62.202	17.44	0.771108	-0.50776	normal	normal
1941	62.71	23.4	1.099266	0.948866	warm	normal
1942	58.723	23.19	-1.47625	0.897542	cool	normal
1943	60.31	20.6	-0.45108	0.264547	normal	normal
1944	61.233	22.69	0.145154	0.775342	normal	normal
					very	
1945	57.995	19.51	-1.94653	-0.00185	cool	normal
1946	59.672	22.27	-0.86322	0.672694	normal	normal
1947	62.375	15.67	0.882863	-0.94034	normal	normal
1948	62.193	14.9	0.765295	-1.12853	normal	dry
1949	62.92	18.31	1.234921	-0.29513	warm	normal
1950	60.222	14.65	-0.50793	-1.18963	normal	dry
1951	59.1	24.57	-1.23272	1.234813	cool	wet
1952	60.733	19.5	-0.17784	-0.00429	normal	normal
1953	62.7	22.16	1.092806	0.64581	warm	normal
1954	59.787	19.98	-0.78893	0.113019	normal	normal
					very	
1955	63.628	19.7	1.692275	0.044587	warm	normal
1956	61.677	20.8	0.431969	0.313427	normal	normal
1957	60.182	27.58	-0.53377	1.970456	normal	very wet
1958	60.47	15.13	-0.34773	-1.07232	normal	dry
1959	61.565	21.71	0.359619	0.53583	normal	normal
1960	61.117	17.18	0.070221	-0.5713	normal	normal
1961	61.045	18.06	0.02371	-0.35623	normal	normal
1962	60.667	23.46	-0.22047	0.96353	normal	normal
					very	
1963	63.393	20.39	1.54047	0.213223	warm	normal
1964	61.768	17.49	0.490753	-0.49554	normal	normal
1965	59.612	25.2	-0.90198	1.388785	normal	wet
1966	60.358	17.02	-0.42008	-0.6104	normal	normal
					very	
1967	58.66	14.87	-1.51695	-1.13586	cool	dry
1968	60.352	24.56	-0.42395	1.232369	normal	wet
1969	60.057	13.89	-0.61452	-1.37537	normal	dry
1970	61.785	18.78	0.501735	-0.18026	normal	normal
1971	60.78	23.88	-0.14747	1.066177	normal	wet
1972	59.833	23.38	-0.75922	0.943978	normal	normal
1973	61.753	20.77	0.481064	0.306095	normal	normal
1974	59.858	15.3	-0.74307	-1.03077	normal	dry
1975	61.88	16.43	0.563103	-0.7546	normal	normal
1976	61.09	9.49	0.052779	-2.45073	normal	ext. dry
1977	62.062	23.48	0.680671	0.968418	normal	normal
1978	62.15	20.82	0.737517	0.318315	normal	normal

1979	59.533	21.78	-0.95301	0.552938	normal	normal
1980	60.88	19.38	-0.08288	-0.03362	normal	normal
1981	60.068	21.54	-0.60741	0.494282	normal	normal
1982	60.835	22.02	-0.11195	0.611594	normal	normal
1983	62.048	22.46	0.671628	0.71913	normal	normal
1984	61.03	24.72	0.014021	1.271473	normal	wet
1985	59.765	24.89	-0.80314	1.313021	normal	wet
1986	60.965	26.35	-0.02797	1.669845	normal	very wet
1987	62.435	16.48	0.921621	-0.74238	normal	normal
					ext.	
1988	64.173	13.32	2.044334	-1.51468	warm	very dry
1989	61.598	16.58	0.380937	-0.71794	normal	normal
1990	60.953	23.24	-0.03572	0.909762	normal	normal
1991	61.993	24.97	0.636099	1.332573	normal	wet
					very	
1992	58.508	17.06	-1.61514	-0.60063	cool	normal
					very	
1993	58.335	26.42	-1.72689	1.686953	cool	very wet
1994	61.678	20.3	0.432615	0.191227	normal	normal
1995	61.233	23.18	0.145154	0.895098	normal	normal
1996	60.247	17.23	-0.49178	-0.55908	normal	normal
1997	61.78	20.07	0.498505	0.135015	normal	normal
					ext.	
1998	64.167	21	2.040458	0.362307	warm	normal
1999	62.328	21.58	0.852502	0.504058	normal	normal
2000	62.283	16	0.823433	-0.85969	normal	normal
2001	62.588	15.82	1.020456	-0.90368	warm	normal
2002	61.243	28.34	0.151614	2.1562	normal	ext. wet
2003	62.272	17.69	0.816327	-0.44666	normal	normal
2004	60.35	24.7	-0.42525	1.266585	normal	wet
2005	63.227	25.62	1.433237	1.491433	warm	wet
2006	62.238	15.48	0.794364	-0.98678	normal	normal

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## May-Oct: East-central MN

<u>YEAR</u>	<u>EC T</u>	<u>EC P</u>	<u>EC Tz</u>	<u>EC Pz</u>	<u>T class</u>	<u>P class</u>
1891	59.01	14.95	-0.08242	-1.37975	normal	dry
1892	59.133	21.96	0.000646	0.355864	normal	normal
1893	59.555	13.8	0.285654	-1.66448	normal	very dry
1894	61.365	14.15	1.50808	-1.57782	warm	very dry
1895	58.392	17.81	-0.49981	-0.67164	normal	normal
1896	58.57	18.72	-0.37959	-0.44633	normal	normal
1897	60.097	23.06	0.651706	0.628215	normal	normal
1898	59.105	21.05	-0.01826	0.130556	normal	normal
1899	59.49	26.38	0.241754	1.450218	normal	wet
1900	63.022	22.51	2.627175	0.492039	warm	normal
1901	60.98	18.4	1.248062	-0.52556	warm	normal
1902	58.482	22.79	-0.43902	0.561365	normal	normal
1903	57.845	28.76	-0.86924	2.039486	normal	ext. wet
1904	58.047	22.76	-0.73281	0.553937	normal	normal
1905	58.623	27.42	-0.34379	1.707713	normal	very wet
1906	59.447	24.03	0.212713	0.868378	normal	normal
1907	56.502	19.14	-1.77626	-0.34234	cool	normal
1908	59.372	23.34	0.16206	0.69754	normal	normal
1909	58.515	18.95	-0.41674	-0.38939	normal	normal
1910	59.558	11.09	0.28768	-2.33545	normal	ext. dry
1911	58.165	22.92	-0.65312	0.593552	normal	normal
1912	57.705	18.57	-0.96379	-0.48347	normal	normal
1913	57.922	23.23	-0.81723	0.670305	normal	normal
1914	60.383	22.77	0.844863	0.556413	normal	normal
1915	55.85	21.22	-2.21661	0.172647	cool	normal
1916	58.025	21.15	-0.74767	0.155315	normal	normal
1917	54.605	14.83	-3.05745	-1.40946	cool	dry
1918	57.448	16.48	-1.13736	-1.00094	cool	dry
1919	58.313	18.65	-0.55316	-0.46366	normal	normal
1920	59.968	21.66	0.564583	0.281587	normal	normal
1921	61.663	16.99	1.709342	-0.87467	warm	normal
1922	61.192	13.89	1.391241	-1.6422	warm	very dry
1923	59.753	15.5	0.419378	-1.24358	normal	dry
1924	56.625	21.35	-1.69319	0.204833	cool	normal
1925	56.607	16.72	-1.70535	-0.94151	cool	normal
1926	57.492	20.58	-1.10764	0.014188	cool	normal
1927	57.003	17.3	-1.4379	-0.79791	cool	normal
1928	58.035	23.21	-0.74091	0.665353	normal	normal
1929	58.21	14.92	-0.62272	-1.38718	normal	dry
1930	60.13	16.59	0.673994	-0.9737	normal	normal
1931	61.977	19	1.921409	-0.37701	warm	normal
1932	59.905	14.06	0.522035	-1.60011	normal	very dry

					very	
1933	61.468	17.06	1.577644	-0.85733	warm	normal
1934	60.62	17.61	1.004927	-0.72116	warm	normal
1935	58.268	21.64	-0.58355	0.276635	normal	normal
1936	60.643	10.95	1.020461	-2.37012	warm	ext. dry
1937	59.877	18.57	0.503124	-0.48347	normal	normal
1938	60.348	23.26	0.821225	0.677733	normal	normal
1939	60.502	17.34	0.925233	-0.78801	normal	normal
1940	59.915	16.53	0.528788	-0.98856	normal	normal
1941	61.068	26.13	1.307494	1.38832	warm	wet
1942	57.262	22.65	-1.26298	0.526702	cool	normal
1943	58.85	22.43	-0.19048	0.472232	normal	normal
1944	59.558	27.58	0.28768	1.747328	normal	very wet
					very	
1945	56.22	20.26	-1.96672	-0.06504	cool	normal
1946	58.042	23.65	-0.73619	0.774294	normal	normal
1947	60.635	15.59	1.015058	-1.22129	warm	dry
1948	60.477	13.08	0.908348	-1.84275	normal	very dry
1949	60.727	21.84	1.077192	0.326153	warm	normal
1950	58.14	16.04	-0.67	-1.10988	normal	dry
1951	57.412	26.82	-1.16167	1.559158	cool	very wet
1952	58.708	22.18	-0.28639	0.410334	normal	normal
1953	60.802	24.88	1.127845	1.078831	warm	wet
1954	57.75	22.05	-0.9334	0.378147	normal	normal
					very	
1955	61.665	23.16	1.710693	0.652974	warm	normal
1956	59.242	18.61	0.074262	-0.47357	normal	normal
1957	58.442	23.61	-0.46604	0.76439	normal	normal
1958	58.133	18.46	-0.67473	-0.51071	normal	normal
1959	59.672	22.17	0.364673	0.407858	normal	normal
1960	59.467	16.32	0.226221	-1.04055	normal	dry
1961	59.557	16.31	0.287005	-1.04303	normal	dry
1962	58.685	22.39	-0.30192	0.462328	normal	normal
1963	61.318	18.68	1.476338	-0.45624	warm	normal
1964	59.523	20.95	0.264042	0.105797	normal	normal
1965	57.405	25.42	-1.1664	1.21253	cool	wet
1966	58.325	18.12	-0.54506	-0.59489	normal	normal
					very	
1967	56.858	15.7	-1.53583	-1.19406	cool	dry
1968	58.54	27.71	-0.39985	1.779515	normal	very wet
1969	58.138	14.88	-0.67135	-1.39708	normal	dry
1970	59.735	19.87	0.407221	-0.1616	normal	normal
1971	58.88	23.5	-0.17022	0.737155	normal	normal
1972	57.72	25.9	-0.95366	1.331374	normal	wet
1973	59.663	23.96	0.358594	0.851047	normal	normal
1974	57.43	18.22	-1.14952	-0.57013	cool	normal
1975	59.758	20.54	0.422755	0.004284	normal	normal
1976	58.88	11.03	-0.17022	-2.35031	normal	ext. dry
1977	59.727	25.43	0.401818	1.215006	normal	wet
1978	59.818	24.33	0.463277	0.942656	normal	normal
1979	57.292	20.99	-1.24272	0.115701	cool	normal
1980	58.617	19.98	-0.34785	-0.13437	normal	normal
1981	57.722	21.87	-0.95231	0.333581	normal	normal

1982	58.722	21.82	-0.27693	0.321201	normal	normal
1983	59.927	21.93	0.536893	0.348436	normal	normal
1984	59.083	24.5	-0.03312	0.984746	normal	normal
1985	57.605	24.94	-1.03133	1.093687	cool	wet
1986	59.012	28	-0.08107	1.851316	normal	very wet
1987	60.462	16.95	0.898218	-0.88457	normal very	normal
1988	61.495	17.04	1.595879	-0.86229	warm	normal
1989	59.822	18.59	0.465979	-0.47852	normal	normal
1990	59.152	23.49	0.013478	0.734679	normal	normal
1991	60.168	25.78	0.699658	1.301663	normal	wet
1992	57.128	17.57	-1.35348	-0.73106	cool	normal
1993	56.977	23.64	-1.45546	0.771818	cool	normal
1994	60.218	21.29	0.733427	0.189978	normal	normal
1995	60.015	26.28	0.596326	1.425459	normal	wet
1996	58.835	19.3	-0.20062	-0.30273	normal	normal
1997	59.187	19.66	0.037116	-0.2136	normal very	normal
1998	61.987	20.02	1.928163	-0.12446	warm	normal
1999	60.522	25.76	0.93874	1.296711	normal	wet
2000	59.993	17.61	0.581468	-0.72116	normal	normal
2001	60.83	19.51	1.146755	-0.25073	warm	normal
2002	59.138	28.99	0.004023	2.096432	normal	ext. wet
2003	60.563	20.29	0.966431	-0.05761	normal	normal
2004	58.457	22.94	-0.45591	0.598504	normal	normal
2005	61.297	25.3	1.462155	1.182819	warm	wet
<b>2006</b>	<b>60.55</b>	<b>15.73</b>	<b>0.957651</b>	<b>-1.18663</b>	<b>normal</b>	<b>dry</b>

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May-Oct: Southwest MN

<u>YEAR</u>	<u>SW T</u>	<u>SW P</u>	<u>SW Tz</u>	<u>SW Pz</u>	<u>T class</u>	<u>P class</u>
1891	61.687	14.55	-0.4586	-1.04412	normal	dry
1892	60.187	22.44	-1.39443	0.828434	cool	normal
1893	61.845	11.69	-0.36003	-1.72289	normal	very dry
					very	
1894	64.947	11.08	1.575269	-1.86766	warm	very dry
1895	61.993	16.45	-0.26769	-0.59319	normal	normal
1896	60.042	20.34	-1.48489	0.330036	cool	normal
1897	62.268	16.77	-0.09612	-0.51724	normal	normal
1898	60.808	17.36	-1.007	-0.37721	cool	normal
1899	61.663	20.05	-0.47357	0.26121	normal	normal
1900	64.613	21.79	1.366891	0.674168	warm	normal
1901	63.48	17.35	0.660028	-0.37959	normal	normal
1902	60.382	20.46	-1.27277	0.358516	cool	normal
					very	
1903	59.41	31.1	-1.87919	2.883733	cool	ext. wet
1904	60.397	20.74	-1.26341	0.424969	cool	normal
1905	61.11	26.2	-0.81858	1.720804	normal	very wet
1906	61.785	21.84	-0.39746	0.686035	normal	normal
					very	
1907	59.54	20.35	-1.79808	0.33241	cool	normal
1908	61.562	24.8	-0.53659	1.388539	normal	wet
1909	61.557	18.82	-0.5397	-0.03071	normal	normal
1910	61.882	13.08	-0.33694	-1.393	normal	dry
1911	62.188	22.12	-0.14603	0.752488	normal	normal
1912	60.557	14.43	-1.16359	-1.0726	cool	dry
1913	61.653	19.7	-0.47981	0.178144	normal	normal
1914	63.862	26.42	0.898353	1.773017	normal	very wet
					ext.	
1915	59.003	21.34	-2.13311	0.567369	cool	normal
1916	61.467	15.91	-0.59585	-0.72135	normal	normal
					ext.	
1917	58.51	16.17	-2.44069	-0.65964	cool	normal
1918	62.05	20.36	-0.23213	0.334783	normal	normal
1919	61.422	20.57	-0.62393	0.384623	normal	normal
1920	62.8	22.52	0.235786	0.847421	normal	normal
1921	64.822	17.9	1.497283	-0.24905	warm	normal
1922	64.753	11.45	1.454235	-1.77985	warm	very dry
1923	62.513	16.81	0.05673	-0.50775	normal	normal
1924	60.342	17.97	-1.29773	-0.23244	cool	normal
1925	61.033	16.67	-0.86662	-0.54097	normal	normal
1926	62.802	19.12	0.237033	0.040491	normal	normal
1927	61.383	16.17	-0.64826	-0.65964	normal	normal
1928	61.952	18.93	-0.29327	-0.0046	normal	normal
1929	61.495	19.82	-0.57839	0.206624	normal	normal
1930	63.028	18.28	0.378032	-0.15887	normal	normal
					ext.	
1931	66.088	12.97	2.287123	-1.4191	warm	dry
1932	63.265	16.22	0.525893	-0.64777	normal	normal
					very	
1933	65.058	16.29	1.644521	-0.63116	warm	normal
1934	65.715	18.03	2.054414	-0.2182	ext.	normal

					warm	
1935	62.603	15.15	0.11288	-0.90172	normal	normal
					ext.	
1936	65.883	12.77	2.159227	-1.46657	warm	dry
1937	63.913	16.61	0.930171	-0.55521	normal	normal
					very	
1938	65.09	21.94	1.664485	0.709768	warm	normal
					very	
1939	65.082	18.11	1.659494	-0.19921	warm	normal
1940	64.748	16.51	1.451116	-0.57895	warm	normal
					very	
1941	65.038	18.4	1.632043	-0.13039	warm	normal
1942	60.77	23.77	-1.0307	1.144086	cool	wet
1943	61.733	26.29	-0.4299	1.742164	normal	very wet
1944	62.923	22.44	0.312524	0.828434	normal	normal
					very	
1945	59.912	19.41	-1.566	0.109317	cool	normal
1946	61.313	21.94	-0.69193	0.709768	normal	normal
1947	63.948	16.94	0.952007	-0.47689	normal	normal
1948	63.563	16.87	0.711811	-0.49351	normal	normal
1949	64.118	16.51	1.058068	-0.57895	warm	normal
1950	61.327	15.63	-0.6832	-0.7878	normal	normal
					very	
1951	60.013	21.74	-1.50299	0.662302	cool	normal
1952	62.305	14.07	-0.07304	-1.15804	normal	dry
1953	63.97	20.46	0.965732	0.358516	normal	normal
1954	61.632	17.62	-0.49291	-0.31551	normal	normal
					very	
1955	65.407	12.44	1.862257	-1.54489	warm	very dry
1956	63.862	17.5	0.898353	-0.34399	normal	normal
1957	61.287	25.23	-0.70815	1.490592	normal	wet
1958	62.765	11.85	0.21395	-1.68492	normal	very dry
1959	63.027	21.9	0.377408	0.700275	normal	normal
1960	62.412	21.82	-0.00628	0.681288	normal	normal
1961	61.977	19.05	-0.27767	0.023878	normal	normal
1962	62.518	21.22	0.05985	0.538889	normal	normal
					very	
1963	65.03	22.53	1.627052	0.849794	warm	normal
1964	62.977	18.61	0.346213	-0.08055	normal	normal
1965	61.52	21.43	-0.56279	0.588729	normal	normal
1966	62.02	17.04	-0.25085	-0.45316	normal	normal
1967	60.343	13.51	-1.2971	-1.29094	cool	dry
1968	61.557	27.51	-0.5397	2.03171	normal	ext. wet
1969	61.217	18.15	-0.75183	-0.18972	normal	normal
1970	63.02	20.29	0.373041	0.31817	normal	normal
1971	62.472	17.95	0.031151	-0.23719	normal	normal
1972	61.148	20.15	-0.79487	0.284943	normal	normal
1973	63.727	15.43	0.814128	-0.83527	normal	normal
1974	61.638	13.66	-0.48917	-1.25534	normal	dry
1975	63.413	13.5	0.618228	-1.29332	normal	dry
1976	62.523	9.54	0.062969	-2.23315	normal	ext. dry
1977	63.543	23.8	0.699333	1.151206	normal	wet
1978	63.112	16.12	0.430438	-0.67151	normal	normal
1979	61.208	27.9	-0.75744	2.124269	normal	ext. wet

1980	62.932	16.78	0.318139	-0.51487	normal	normal
1981	61.883	18.74	-0.33632	-0.0497	normal	normal
1982	62.017	22.07	-0.25272	0.740621	normal	normal
1983	63.618	17.9	0.746124	-0.24905	normal	normal
1984	61.963	21.95	-0.28641	0.712142	normal	normal
1985	60.832	21.31	-0.99202	0.560249	normal	normal
1986	61.988	24.4	-0.27081	1.293606	normal	wet
1987	63.307	15.41	0.552096	-0.84001	normal	normal
					very	
1988	65.142	11.72	1.696927	-1.71577	warm	very dry
1989	62.973	13.99	0.343718	-1.17702	normal	dry
1990	62.435	19.18	0.008067	0.054731	normal	normal
1991	63.003	22.96	0.362434	0.951847	normal	normal
					very	
1992	59.707	22.12	-1.69389	0.752488	cool	normal
					very	
1993	59.73	32.9	-1.67955	3.310931	cool	ext. wet
1994	63.025	20.76	0.37616	0.429716	normal	normal
1995	62.072	23.1	-0.2184	0.985074	normal	normal
1996	61.028	19.96	-0.86974	0.23985	normal	normal
1997	62.76	16.12	0.21083	-0.67151	normal	normal
					very	
1998	64.97	18.33	1.589619	-0.147	warm	normal
1999	63.285	14.42	0.53837	-1.07497	normal	dry
2000	63.278	18.79	0.534003	-0.03783	normal	normal
2001	63.53	15.25	0.691223	-0.87799	normal	normal
2002	62.128	19.74	-0.18347	0.187637	normal	normal
2003	62.63	16.26	0.129725	-0.63828	normal	normal
2004	61.553	24.31	-0.5422	1.272246	normal	wet
2005	64.223	25.97	1.123576	1.666218	warm	very wet
2006	62.767	15	0.215197	-0.93732	normal	normal

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## May-Oct South-central MN

YEAR	SC_T	SC_P	SC_Tz	SC_Pz	T_class	P_class
1891	60.833	15.31	-1.21477	-1.3467	cool very	dry
1892	59.755	25.47	-1.91415	1.033836	cool	wet
1893	61.823	13.97	-0.57247	-1.66067	normal	very dry
1894	64.26	12.77	1.008607	-1.94184	warm	very dry
1895	62.11	18.26	-0.38627	-0.6555	normal	normal
1896	61.535	18.23	-0.75932	-0.66253	normal	normal
1897	62.822	17.5	0.075659	-0.83358	normal	normal
1898	61.572	17.66	-0.73532	-0.79609	normal	normal
1899	62.975	23.5	0.174923	0.572255	normal very	normal
1900	65.758	24.05	1.980481	0.701122	warm	normal
1901	64.785	20.33	1.349217	-0.17049	warm	normal
1902	61.097	27.14	-1.04349	1.425125	cool	wet
1903	60.785	29.83	-1.24591	2.055406	cool	ext. wet
1904	60.873	19.13	-1.18882	-0.45166	cool	normal
1905	61.822	26.27	-0.57312	1.22128	normal	wet
1906	62.33	25.66	-0.24354	1.078354	normal ext.	wet
1907	59.217	21.97	-2.2632	0.213768	cool	normal very
1908	62.49	28.22	-0.13974	1.678175	normal	wet
1909	61.988	21.39	-0.46542	0.077871	normal	normal
1910	62.753	11.86	0.030893	-2.15506	normal	ext. dry
1911	63.095	25.09	0.252776	0.9448	normal	normal
1912	61.458	17.87	-0.80928	-0.74688	normal	normal
1913	62.68	21.78	-0.01647	0.16925	normal	normal
1914	64.6	24.59	1.229192	0.827647	warm ext.	normal
1915	59.61	24.12	-2.00823	0.717524	cool	normal
1916	62.145	20.58	-0.36357	-0.11192	normal ext.	normal
1917	59.275	19.98	-2.22557	-0.2525	cool	normal
1918	62.258	26.92	-0.29025	1.373578	normal	wet
1919	62.405	20.49	-0.19488	-0.133	normal	normal
1920	63.472	16.96	0.497367	-0.9601	normal very	normal
1921	65.278	20.15	1.669066	-0.21267	warm very	normal
1922	65.155	13.23	1.589266	-1.83406	warm	very dry
1923	62.812	18.77	0.069171	-0.53601	normal very	normal
1924	60.102	21.55	-1.68903	0.11536	cool	normal
1925	60.518	21.36	-1.41913	0.070842	cool	normal
1926	62.22	21.23	-0.31491	0.040382	normal	normal
1927	61.15	17.73	-1.0091	-0.77969	cool	normal
1928	61.907	21.05	-0.51798	-0.00179	normal	normal
1929	61.427	18.87	-0.82939	-0.51258	normal	normal
1930	62.762	21.17	0.036732	0.026324	normal very	normal
1931	65.765	17.06	1.985023	-0.93667	warm	normal
1932	63.032	16.74	0.211903	-1.01165	normal	dry

1933	65.108	15.47	1.558773	-1.30922	very warm	dry
1934	65.883	15.79	2.061579	-1.23424	warm	dry
1935	62.055	20.61	-0.42196	-0.10489	normal	normal
1936	65.388	14.61	1.740432	-1.51072	very warm	very dry
1937	63.98	18	0.826948	-0.71642	normal	normal
1938	64.853	23.81	1.393334	0.644889	warm	normal
1939	65.205	16.08	1.621705	-1.16629	very warm	dry
1940	64.013	21.42	0.848358	0.0849	warm	normal
1941	64.87	23.86	1.404363	0.656604	normal	normal
1942	61.243	23.04	-0.94877	0.464474	warm	normal
1943	61.948	27.22	-0.49138	1.44387	normal	wet
1944	63.348	24.57	0.416918	0.822961	normal	normal
1945	60.135	22.59	-1.66762	0.359037	very cool	normal
1946	61.882	23.03	-0.5342	0.462131	cool	normal
1947	64.628	20.97	1.247358	-0.02054	normal	normal
1948	63.93	17.62	0.794509	-0.80546	warm	normal
1949	65.178	16.11	1.604188	-1.15926	very warm	dry
1950	62.063	16.03	-0.41677	-1.178	warm	dry
1951	61.103	25.36	-1.0396	1.008062	normal	wet
1952	62.505	17.58	-0.13	-0.81483	cool	normal
1953	64.787	19.97	1.350515	-0.25484	normal	normal
1954	62.267	22.3	-0.28441	0.291088	warm	normal
1955	65.54	15.75	1.839047	-1.24361	very warm	dry
1956	63.803	20.92	0.712114	-0.03225	warm	normal
1957	62.162	23.99	-0.35254	0.687064	normal	normal
1958	62.983	13.08	0.180113	-1.8692	normal	very dry
1959	63.422	26.88	0.464928	1.364206	normal	wet
1960	62.818	22.08	0.073064	0.239541	normal	normal
1961	62.455	21.73	-0.16244	0.157535	normal	normal
1962	62.563	23.08	-0.09238	0.473846	normal	normal
1963	64.987	20.76	1.480271	-0.06974	normal	normal
1964	63.445	22.82	0.47985	0.412927	warm	normal
1965	61.74	23.86	-0.62632	0.656604	normal	normal
1966	61.918	18.51	-0.51084	-0.59693	normal	normal
1967	60.238	18.59	-1.60079	-0.57818	very cool	normal
1968	61.825	32.23	-0.57118	2.617738	cool	ext. wet
1969	61.755	17.92	-0.61659	-0.73517	normal	normal
1970	63.212	23.18	0.328684	0.497277	normal	normal
1971	62.778	20.28	0.047113	-0.18221	normal	normal
1972	61.385	20.45	-0.85664	-0.14238	normal	normal
1973	63.473	20.95	0.498016	-0.02522	normal	normal
1974	61.498	17.38	-0.78333	-0.86169	normal	normal
1975	63.717	16.08	0.656318	-1.16629	normal	dry
1976	62.233	12.28	-0.30647	-2.05665	normal	ext. dry
1977	63.718	24.69	0.656967	0.851078	normal	normal
1978	63.488	19.5	0.507748	-0.36497	normal	normal

1979	61.41	25.76	-0.84042	1.101784	normal	wet
1980	62.8	20.02	0.061386	-0.24313	normal	normal
1981	61.61	24.92	-0.71066	0.904968	normal	normal
1982	62.197	24.02	-0.32983	0.694093	normal	normal
1983	63.87	21.4	0.755582	0.080214	normal	normal
1984	62.517	21.72	-0.12222	0.155191	normal	normal
1985	61.367	20.49	-0.86832	-0.133	normal	normal
1986	62.63	27.18	-0.04891	1.434497	normal	wet
1987	63.938	18.71	0.799699	-0.55007	normal	normal
					very	
1988	65.673	12.09	1.925335	-2.10117	warm	ext. dry
1989	63.195	14.3	0.317655	-1.58335	normal	very dry
1990	62.792	25.04	0.056196	0.933085	normal	normal
1991	63.418	26.69	0.462333	1.319688	normal	wet
					very	
1992	59.945	22.18	-1.79088	0.262972	cool	normal
					very	
1993	60.078	32.91	-1.7046	2.777066	cool	ext. wet
1994	63.118	23.91	0.267698	0.66832	normal	normal
1995	62.732	23.83	0.017269	0.649575	normal	normal
1996	61.148	20.8	-1.0104	-0.06037	cool	normal
1997	62.393	22.14	-0.20267	0.2536	normal	normal
1998	64.977	23.48	1.473783	0.567569	warm	normal
1999	63.083	21.76	0.244991	0.164564	normal	normal
2000	63.347	22.86	0.416269	0.422299	normal	normal
2001	63.205	19.44	0.324142	-0.37902	normal	normal
2002	62.37	24.33	-0.21759	0.766728	normal	normal
2003	62.842	16.01	0.088635	-1.18269	normal	dry
2004	61.69	30.27	-0.65876	2.1585	normal	ext. wet
2005	64.537	26.53	1.188319	1.282199	warm	wet
2006	63.15	17.61	0.288459	-0.8078	normal	normal

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## May-Oct southeast MN

YEAR	SE_T	SE_P	SE_Tz	SE_Pz	T_class	P_class
1891	60.04	17.44	-1.3667	-0.96678	cool	normal
1892	60.372	26.17	-1.1461	0.944002	cool	normal
1893	61.777	14.75	-0.21252	-1.55556	normal	very dry
1894	63.577	14.8	0.983513	-1.54462	normal	very dry
1895	61.348	18.47	-0.49758	-0.74134	normal	normal
1896	61.158	18.56	-0.62383	-0.72164	normal	normal
1897	62.38	17.95	0.188148	-0.85516	normal	normal
1898	61.622	16.88	-0.31552	-1.08936	normal	dry
1899	62.23	24.32	0.088478	0.539082	normal	normal
					very	very
1900	64.948	29.7	1.894495	1.716635	warm	wet
1901	63.863	23.97	1.17355	0.462475	warm	normal
						very
1902	61.508	29.67	-0.39127	1.710068	normal	wet
						very
1903	60.537	30.04	-1.03646	1.791052	cool	wet
1904	60.612	23.16	-0.98663	0.285186	normal	normal
1905	61.285	24.78	-0.53944	0.639765	normal	normal
1906	62.42	24.9	0.214726	0.66603	normal	normal
					very	
1907	59.175	22.79	-1.94146	0.204202	cool	normal
1908	62.03	24.41	-0.04442	0.558781	normal	normal
1909	61.552	20.47	-0.36203	-0.30359	normal	normal
1910	62.677	11.32	0.385494	-2.30631	normal	ext. dry
						very
1911	62.723	30.25	0.416059	1.837016	normal	wet
1912	60.567	20.15	-1.01653	-0.37363	cool	normal
1913	62.413	22.99	0.210075	0.247977	normal	normal
1914	63.743	25.01	1.093814	0.690106	warm	normal
					ext.	
1915	58.95	26.07	-2.09097	0.922115	cool	normal
1916	61.595	20.07	-0.33346	-0.39114	normal	normal
					ext.	
1917	57.85	21.77	-2.82188	-0.01905	cool	normal
1918	61.062	21.61	-0.68762	-0.05407	normal	normal
1919	61.765	19	-0.2205	-0.62534	normal	normal
1920	63.098	18.3	0.665234	-0.77855	normal	normal
					very	
1921	64.76	21	1.769576	-0.18759	warm	normal
1922	64.082	16.43	1.319068	-1.18785	warm	dry
1923	62.552	17.66	0.302436	-0.91863	normal	normal
					very	
1924	59.568	24.08	-1.68033	0.486552	cool	normal
1925	59.925	25.57	-1.44312	0.812677	cool	normal
1926	61.355	20.87	-0.49293	-0.21604	normal	normal
1927	60.417	18.53	-1.1162	-0.72821	cool	normal
1928	61.617	24.78	-0.31884	0.639765	normal	normal
1929	60.903	17.53	-0.79327	-0.94709	normal	normal
1930	62.298	20.56	0.133662	-0.28389	normal	normal
					ext.	
1931	65.425	18.54	2.211446	-0.72602	warm	normal

1932	62.418	15.42	0.213397	-1.40891	normal	dry
					very	
1933	64.46	18.64	1.570236	-0.70413	warm	normal
					very	
1934	65.087	19.06	1.986856	-0.61221	warm	normal
1935	61.553	23.41	-0.36137	0.339905	normal	normal
					ext.	
1936	65.203	16.58	2.063934	-1.15502	warm	dry
1937	63.667	17.68	1.043315	-0.91425	warm	normal
						very
1938	63.87	29.96	1.178202	1.773542	warm	wet
					very	
1939	64.533	15.73	1.618742	-1.34106	warm	dry
1940	63.185	19.97	0.723043	-0.41303	normal	normal
1941	64.308	22.06	1.469237	0.044422	warm	normal
						very
1942	60.43	30.28	-1.10756	1.843583	cool	wet
1943	61.313	21.83	-0.52084	-0.00592	normal	normal
1944	62.478	20.86	0.253265	-0.21823	normal	normal
					very	
1945	59.81	23.28	-1.51953	0.311451	cool	normal
1946	61.667	22.13	-0.28562	0.059744	normal	normal
1947	63.875	22.01	1.181524	0.033479	warm	normal
1948	63.832	14.65	1.152952	-1.57745	warm	very dry
					ext.	
1949	65.202	14.3	2.06327	-1.65406	warm	very dry
1950	62.423	18.03	0.21672	-0.83765	normal	normal
1951	61.147	25.8	-0.63114	0.863018	normal	normal
1952	61.628	18.13	-0.31153	-0.81576	normal	normal
1953	64.222	19.93	1.412093	-0.42178	warm	normal
1954	61.98	26.47	-0.07764	1.009665	normal	wet
					very	
1955	64.963	15.9	1.904462	-1.30385	warm	dry
1956	63.382	21.23	0.853942	-0.13724	normal	normal
1957	61.733	26.49	-0.24176	1.014043	normal	wet
1958	61.967	15.3	-0.08628	-1.43518	normal	dry
						very
1959	62.865	29.47	0.510414	1.666293	normal	wet
1960	61.892	22.31	-0.13611	0.099141	normal	normal
1961	61.798	20.4	-0.19857	-0.31891	normal	normal
1962	61.342	23.44	-0.50157	0.346471	normal	normal
1963	63.387	16.39	0.857265	-1.1966	normal	dry
1964	62.515	17.07	0.277851	-1.04777	normal	dry
1965	60.745	25.5	-0.89825	0.797356	normal	normal
1966	60.725	18.25	-0.91154	-0.7895	normal	normal
					very	
1967	59.295	18.34	-1.86173	-0.7698	cool	normal
						very
1968	61.005	28.89	-0.72549	1.539345	normal	wet
1969	60.588	20.89	-1.00257	-0.21166	cool	normal
1970	62.583	26.27	0.323034	0.96589	normal	normal
1971	61.985	20.64	-0.07432	-0.26638	normal	normal
1972	60.342	25.98	-1.16603	0.902416	cool	normal
1973	62.38	25.81	0.188148	0.865207	normal	normal
1974	60.14	18.77	-1.30026	-0.67568	cool	normal

1975	62.45	17.88	0.23466	-0.87048	normal	normal
1976	61.047	11.86	-0.69758	-2.18811	normal	ext. dry
1977	62.913	22.16	0.542308	0.06631	normal	normal
1978	62.44	27.41	0.228016	1.215409	normal	wet
1979	61.298	24.48	-0.5308	0.574102	normal	normal
1980	62.392	25.91	0.196121	0.887095	normal	normal
1981	60.832	25.01	-0.84044	0.690106	normal	normal
1982	61.935	23.96	-0.10754	0.460287	normal	normal
1983	62.773	25.58	0.449283	0.814866	normal	normal
1984	61.903	21.1	-0.1288	-0.1657	normal	normal
1985	61.265	18.22	-0.55273	-0.79606	normal	normal
1986	61.617	31.48	-0.31884	2.106234	normal	ext. wet
1987	62.732	21.6	0.42204	-0.05626	normal	normal
					very	
1988	64.492	14.9	1.591499	-1.52273	warm	very dry
1989	62.23	16.09	0.088478	-1.26227	normal	dry
1990	61.94	28.35	-0.10422	1.421152	normal	wet
1991	62.867	24.23	0.511743	0.519383	normal	normal
					very	
1992	59.543	18.93	-1.69694	-0.64066	cool	normal
					very	very
1993	59.79	29.14	-1.53282	1.594064	cool	wet
1994	62.6	23.5	0.33433	0.359604	normal	normal
1995	62.775	19.95	0.450612	-0.41741	normal	normal
1996	60.502	17.96	-1.05972	-0.85297	cool	normal
1997	61.425	25.26	-0.44642	0.744825	normal	normal
					very	
1998	64.39	27.61	1.523724	1.259184	warm	wet
1999	62.798	24.96	0.465894	0.679163	normal	normal
2000	62.86	26.25	0.507091	0.961513	normal	normal
2001	62.493	22.29	0.263232	0.094764	normal	normal
2002	61.993	26.67	-0.069	1.05344	normal	wet
2003	62.295	15.73	0.131668	-1.34106	normal	dry
2004	61.125	31.96	-0.64576	2.211294	normal	ext. wet
2005	63.72	24.26	1.078532	0.525949	warm	normal
2006	61.998	19.55	-0.06568	-0.50496	normal	normal

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## Jun-Aug northwest MN

YEAR	NW_T	NW_P	NW_Tz	NW_Pz	T_class	P_class
1891	62.373	12.2	-1.53046	0.822185	cool	normal
1892	65.283	8.02	-0.05445	-0.79951	normal	normal
1893	66.107	9.58	0.363496	-0.19428	normal	normal
1894	68.38	5.23	1.516402	-1.88193	warm	very dry
1895	61.593	13.16	-1.92609	1.194631	cool	wet
1896	64.617	7.14	-0.39226	-1.14092	normal	dry
1897	63.117	13.85	-1.15309	1.462327	cool	wet
1898	63.017	11.08	-1.20381	0.387664	cool	normal
1899	64.647	11.12	-0.37704	0.403183	normal	normal
1900	67.243	12.62	0.939696	0.98513	normal	normal
1901	66.177	13.66	0.399001	1.388614	normal	wet
1902	63.407	9.65	-1.00599	-0.16713	cool	normal
1903	63.393	7.96	-1.01309	-0.82279	cool	normal
1904	62.82	8.54	-1.30373	-0.59777	cool	normal
1905	64.153	14.49	-0.62761	1.710625	normal	very wet
1906	65.147	10.35	-0.12343	0.10445	normal	normal
1907	63.957	10.72	-0.72702	0.247997	normal	normal
1908	64.04	9.08	-0.68492	-0.38827	normal	normal
1909	66.387	13.19	0.505517	1.20627	normal	wet
1910	66.35	3.94	0.48675	-2.38241	normal	ext. dry
1911	64.687	9.6	-0.35675	-0.18652	normal	normal
1912	63.153	8.87	-1.13483	-0.46974	cool	normal
1913	65.333	8.27	-0.02909	-0.70252	normal	normal
1914	65.303	12.39	-0.04431	0.895898	normal	normal
1915	60.027	11.54	-2.72039	0.566128	cool	ext.
1916	65.28	11.12	-0.05597	0.403183	cool	normal
1917	63.613	5.87	-0.90151	-1.63363	normal	normal
1918	63.99	8.33	-0.71028	-0.67924	normal	very dry
1919	67.083	14.7	0.858541	1.792097	normal	very wet
1920	65.037	7.91	-0.17923	-0.84218	normal	normal
1921	68.053	9.56	1.350542	-0.20204	warm	normal
1922	66.197	7.38	0.409146	-1.04781	normal	dry
1923	66.52	9.56	0.572977	-0.20204	normal	normal
1924	62.157	8.22	-1.64001	-0.72192	very cool	normal
1925	64.087	12.44	-0.66108	0.915296	normal	normal
1926	63.413	8	-1.00295	-0.80727	cool	normal
1927	62.41	8.06	-1.51169	-0.78399	very cool	normal
1928	62.907	13.76	-1.2596	1.42741	cool	wet
1929	65.433	4.75	0.021631	-2.06815	normal	ext. dry
1930	67.93	6.01	1.288154	-1.57932	warm	very dry
1931	66.967	8.62	0.799703	-0.56673	normal	normal
1932	67.763	7.23	1.203449	-1.106	warm	dry
1933	68.983	5.61	1.822255	-1.7345	very warm	very dry

1934	65.143	8.44	-0.12546	-0.63656	normal	normal
1935	65.73	11.1	0.172275	0.395423	normal very	normal
1936	68.87	4.58	1.764939	-2.13411	warm	ext. dry
1937	67.29	10.7	0.963535	0.240237	normal	normal
1938	66.52	7.02	0.572977	-1.18747	normal	dry
1939	66.77	8.95	0.699781	-0.4387	normal	normal
1940	65.107	8.24	-0.14372	-0.71416	normal	normal
1941	66.89	11.44	0.760648	0.527331	normal	normal
1942	63.647	12.04	-0.88426	0.76011	normal	normal
1943	65.91	11.11	0.263574	0.399303	normal	normal
1944	64.58	17.01	-0.41103	2.688296	normal	ext. wet
1945	63.33	9.24	-1.04505	-0.32619	cool	normal
1946	64.653	8.95	-0.374	-0.4387	normal	normal
1947	65.97	11.54	0.294007	0.566128	normal	normal
1948	66.173	11.3	0.396972	0.473016	normal	normal
1949	67.633	12.13	1.137511	0.795027	warm	normal
1950	63.53	8.3	-0.9436	-0.69088	normal	normal
1951	63.097	9.86	-1.16323	-0.08565	cool	normal
1952	65.53	11.78	0.070831	0.659239	normal	normal
1953	66.343	10.08	0.483199	-0.0003	normal	normal
1954	65.433	7.8	0.021631	-0.88486	normal very	normal
1955	68.577	10.92	1.616324	0.32559	warm	normal
1956	65.583	11.05	0.097714	0.376025	normal	normal
1957	65.477	12.51	0.043949	0.942454	normal very	normal
1958	62.357	9.99	-1.53857	-0.03522	cool	normal
1959	67.303	12.29	0.970129	0.857102	normal	normal
1960	65.547	11.04	0.079454	0.372145	normal	normal
1961	67.513	5.87	1.076644	-1.63363	warm	very dry
1962	65.167	11.08	-0.11329	0.387664	normal	normal
1963	67.56	9.91	1.100484	-0.06626	warm	normal
1964	64.283	12.59	-0.56167	0.973491	normal	normal
1965	63.773	9.67	-0.82035	-0.15937	normal	normal
1966	65.983	12.19	0.300601	0.818305	normal	normal
1967	63.733	6.01	-0.84064	-1.57932	normal	very dry very
1968	63.433	14.39	-0.9928	1.671828	normal	wet
1969	63.767	8.8	-0.82339	-0.4969	normal	normal
1970	67.387	7.53	1.012735	-0.98961	warm	normal
1971	64.49	8.9	-0.45668	-0.4581	normal	normal
1972	64.507	8.27	-0.44805	-0.70252	normal	normal
1973	66.087	9.37	0.353352	-0.27576	normal	normal
1974	65.29	10.73	-0.0509	0.251876	normal	normal
1975	65.43	11.57	0.020109	0.577767	normal	normal
1976	67.457	8.46	1.04824	-0.6288	warm	normal
1977	64.057	9.16	-0.6763	-0.35723	normal	normal
1978	64.997	10.56	-0.19952	0.185922	normal	normal
1979	63.943	9.42	-0.73412	-0.25636	normal	normal
1980	64.997	9.4	-0.19952	-0.26412	normal	normal
1981	65.063	12.28	-0.16604	0.853222	normal	normal
1982	62.837	9.36	-1.29511	-0.27964	cool	normal



1983	68.55	12.47	1.602629	0.926935	very warm	normal
1984	67.133	8.82	0.883902	-0.48914	normal	normal
1985	61.863	12.84	-1.78914	1.070482	very cool	wet
1986	65.383	9.23	-0.00373	-0.33007	cool	normal
1987	66.95	9.54	0.791081	-0.2098	normal	normal
1988	70.38	7.5	2.530838	-1.00125	ext. warm	dry
1989	67.183	8.21	0.909262	-0.7258	normal	normal
1990	66.4	8.48	0.512111	-0.62104	normal	normal
1991	68.237	10.81	1.44387	0.282913	warm	normal
1992	61.04	11.62	-2.20658	0.597165	ext. cool	normal
1993	63.02	16.4	-1.20229	2.451638	cool	ext. wet
1994	64.187	12.96	-0.61036	1.117038	normal	wet
1995	67.943	11.99	1.294748	0.740712	warm	normal
1996	66.357	7.62	0.4903	-0.95469	normal	normal
1997	66.77	11.16	0.699781	0.418701	normal	normal
1998	66.58	10.99	0.60341	0.352747	normal	normal
1999	66.943	12.81	0.78753	1.058843	normal	wet
2000	65.967	13.35	0.292485	1.268344	normal	wet
2001	68.397	10.12	1.525025	0.015218	very warm	normal
2002	68.287	17.86	1.469231	3.018066	warm	ext. wet
2003	67.39	8.44	1.014257	-0.63656	warm	normal
2004	61.55	8.61	-1.9479	-0.57061	very cool	normal
2005	66.877	13.1	0.754054	1.171353	normal	wet
2006	68.613	6.13	1.634584	-1.53276	very warm	very dry

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### Jun-Aug north-central MN

YEAR	NC_T	NC_P	NC_Tz	NC_Pz	T_class	P_class
1891	60.807	11.87	-1.79624	0.303142	cool	normal
1892	64.053	7.12	-0.05466	-1.45065	normal	dry
1893	64.867	11.21	0.382081	0.059457	normal	normal
1894	66.947	5.7	1.498071	-1.97494	warm	very dry
1895	60.827	13.44	-1.78551	0.882817	cool	normal
1896	63.663	8.83	-0.26391	-0.81929	normal	normal
1897	61.77	15.05	-1.27956	1.47726	cool	wet
1898	62.36	13.75	-0.96301	0.997275	normal	normal
1899	63.83	15.38	-0.1743	1.599102	normal	very wet
1900	65.64	15.11	0.796821	1.499413	normal	wet
1901	65.28	13.83	0.603669	1.026812	normal	wet
1902	62.503	10.81	-0.88628	-0.08823	normal	normal
1903	61.637	8.62	-1.35092	-0.89682	cool	normal
1904	61.827	8.64	-1.24898	-0.88944	cool	normal
1905	63.413	17.15	-0.39804	2.252621	normal	ext. wet
1906	64.41	10.2	0.136885	-0.31345	normal	normal
1907	63.1	11.13	-0.56597	0.02992	normal	normal
1908	62.16	9.82	-1.07031	-0.45376	cool	normal
1909	65.797	12.83	0.881057	0.657593	normal	normal
1910	65.49	5.06	0.716341	-2.21124	normal	ext. dry
1911	64.393	11.08	0.127764	0.011459	normal	normal
1912	62.133	8.88	-1.0848	-0.80082	cool	normal
1913	64.577	11.58	0.226486	0.196068	normal	normal
1914	64.603	13.46	0.240436	0.890201	normal	normal
1915	60.103	12.82	-2.17396	0.6539	cool	ext. normal
1916	65.393	11.77	0.664298	0.26622	normal	normal
1917	63.097	6.35	-0.56758	-1.73495	normal	very dry
1918	63.707	8.52	-0.2403	-0.93374	normal	normal
1919	65.95	16.6	0.963147	2.04955	normal	ext. wet
1920	63.85	9.03	-0.16357	-0.74544	normal	normal
1921	67.097	8.78	1.578551	-0.83775	warm	very normal
1922	64.903	7.37	0.401396	-1.35835	normal	dry
1923	65.84	8.99	0.904128	-0.76021	normal	normal
1924	60.98	9.97	-1.70342	-0.39838	cool	very normal
1925	63.127	11.1	-0.55149	0.018843	normal	normal
1926	61.92	9.62	-1.19908	-0.5276	cool	normal
1927	61.233	9.8	-1.56768	-0.46114	cool	very normal
1928	61.777	14.58	-1.27581	1.303727	cool	normal wet
1929	64.04	5.67	-0.06163	-1.98602	normal	very dry
1930	66.137	6.38	1.063479	-1.72387	warm	very dry
1931	65.74	9.98	0.850475	-0.39468	normal	normal
1932	65.947	9.65	0.961537	-0.51653	normal	normal
1933	67.253	5.2	1.66225	-2.15955	warm	very ext. dry
1934	63.21	8.88	-0.50695	-0.80082	normal	normal

1935	64.5	13.85	0.185173	1.034197	normal	wet
1936	66.153	5.34	1.072063	-2.10786	warm	ext. dry
1937	66.427	14.18	1.219073	1.156039	warm	wet
1938	65.593	7.47	0.771604	-1.32142	normal	dry
1939	65.277	11.33	0.60206	0.103763	normal	normal
1940	63.623	7.65	-0.28537	-1.25496	normal	dry
1941	65.533	11.64	0.739412	0.218221	normal	normal
1942	62.553	13.56	-0.85946	0.927123	normal	normal
1943	65.41	11.91	0.673419	0.317911	normal	normal
1944	64.067	18.71	-0.04715	2.828603	normal	ext. wet
1945	61.87	9.28	-1.22591	-0.65314	cool	normal
1946	63.4	9.57	-0.40501	-0.54606	normal	normal
1947	65.367	11.26	0.650348	0.077918	normal	normal
1948	64.537	10.02	0.205025	-0.37991	normal	normal very
1949	66.21	15.5	1.102646	1.643409	warm	wet
1950	61.74	11.28	-1.29566	0.085302	cool	normal
1951	61.553	10.88	-1.39599	-0.06239	cool	normal
1952	64.247	14.05	0.04943	1.10804	normal	wet
1953	65.17	14.83	0.544651	1.396032	normal	wet
1954	64.077	8.13	-0.04178	-1.07774	normal	dry very
1955	67.593	10.03	1.844671	-0.37622	warm	normal
1956	64.073	8.93	-0.04393	-0.78236	normal	normal
1957	64.157	12.74	0.001142	0.624363	normal	normal very
1958	61.11	10.82	-1.63367	-0.08454	cool	normal
1959	66.107	12.81	1.047383	0.650208	warm	normal
1960	63.867	10.61	-0.15445	-0.16207	normal	normal
1961	65.6	7.64	0.77536	-1.25866	normal	dry
1962	62.797	13.12	-0.72854	0.764666	normal	normal
1963	65.363	11.64	0.648202	0.218221	normal	normal
1964	62.64	13.53	-0.81278	0.916046	normal	normal
1965	61.86	10.19	-1.23127	-0.31715	cool	normal
1966	64.487	13.22	0.178198	0.801588	normal	normal
1967	62.173	7.97	-1.06334	-1.13681	cool	dry
1968	62.107	13.64	-1.09875	0.95666	cool	normal
1969	62.38	10.74	-0.95228	-0.11408	normal	normal
1970	66.097	6.94	1.042017	-1.51711	warm	very dry
1971	63.223	8.67	-0.49998	-0.87836	normal	normal
1972	62.903	12.12	-0.67167	0.395447	normal	normal
1973	64.927	11.69	0.414273	0.236682	normal	normal
1974	64.173	11.51	0.009727	0.170223	normal	normal
1975	64.723	12.02	0.30482	0.358525	normal	normal
1976	66.04	10.75	1.011435	-0.11038	warm	normal
1977	63.063	10.99	-0.58583	-0.02177	normal	normal
1978	63.623	14.15	-0.28537	1.144962	normal	wet
1979	62.323	10.03	-0.98286	-0.37622	normal	normal
1980	63.997	10.83	-0.0847	-0.08085	normal	normal
1981	64.193	13.42	0.020458	0.875432	normal	normal
1982	62.233	9.69	-1.03115	-0.50176	cool	normal very
1983	67.367	13.31	1.723415	0.834818	warm	normal

1984	66.04	10.56	1.011435	-0.18054	warm very	normal
1985	60.747	13.12	-1.82844	0.764666	cool	normal
1986	63.903	11.34	-0.13514	0.107456	normal	normal
1987	65.713	10.32	0.835988	-0.26915	normal ext.	normal
1988	67.98	11.63	2.05231	0.214529	warm	normal
1989	65.567	11.71	0.757655	0.244067	normal	normal
1990	65.343	9	0.637471	-0.75652	normal	normal
1991	66.783	10.34	1.410079	-0.26176	warm ext.	normal
1992	59.873	12.32	-2.29737	0.469291	cool	normal
1993	62.437	14.91	-0.9217	1.425569	normal	wet
1994	63.487	13.92	-0.35833	1.060042	normal	wet
1995	66.633	12.34	1.329599	0.476675	warm	normal
1996	64.707	10.22	0.296236	-0.30607	normal	normal
1997	65.17	11.27	0.544651	0.08161	normal	normal
1998	64.997	10.03	0.451831	-0.37622	normal	normal
1999	65.047	15.01	0.478657	1.462491	normal	wet
2000	63.777	12.82	-0.20274	0.6539	normal	normal
2001	66.66	11.6	1.344086	0.203453	warm very	normal
2002	67.007	16.53	1.530263	2.023705	warm	ext. wet
2003	66.277	10.73	1.138593	-0.11777	warm very	normal
2004	60.543	8.8	-1.93789	-0.83036	cool	normal
2005	66.187	11.24	1.090305	0.070534	warm very	normal
2006	67.19	6.12	1.628448	-1.81987	warm	very dry

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## Jun-Aug northeast MN

YEAR	NE_T	NE_P	NE_Tz	NE_Pz	T_class	P_class
1891	59.507	10.18	-1.15579	-0.31839	cool	normal
1892	63.823	8.38	1.074023	-1.05185	warm	dry
1893	63.64	10.18	0.979478	-0.31839	normal	normal
1894	63.99	5.44	1.160302	-2.24982	warm	ext. dry
1895	60.327	9.51	-0.73215	-0.5914	normal	normal
1896	60.973	9.47	-0.3984	-0.6077	normal	normal
1897	59.477	15.87	-1.17129	2.000139	cool	ext. wet
1898	60.607	13.8	-0.58749	1.156666	normal	wet
1899	61.18	16.54	-0.29146	2.273147	normal	ext. wet
1900	63.01	13.75	0.653995	1.136292	normal	wet
1901	62.487	13.26	0.383792	0.93663	normal	normal
1902	59.2	10.31	-1.3144	-0.26542	cool very	normal
1903	58.743	10	-1.55051	-0.39174	cool	normal
1904	59.153	10.74	-1.33869	-0.09021	cool	normal very
1905	62.453	15.04	0.366227	1.661935	normal	wet
1906	62.403	9.78	0.340395	-0.48138	normal	normal
1907	60.777	9.25	-0.49966	-0.69734	normal	normal
1908	59.817	10.84	-0.99564	-0.04946	normal	normal
1909	63.083	14.64	0.69171	1.498945	normal	wet
1910	63.75	6.4	1.036309	-1.85865	warm	very dry
1911	62.737	11.71	0.512952	0.305044	normal	normal
1912	60.553	7.22	-0.61539	-1.52452	normal	very dry
1913	60.777	10.05	-0.49966	-0.37136	normal	normal
1914	62.547	10.05	0.414791	-0.37136	normal	normal
1915	58.423	10.2	-1.71583	-0.31024	cool very	normal
1916	64.003	11.8	1.167019	0.341717	warm	normal
1917	60.953	10.77	-0.40873	-0.07798	normal	normal
1918	61.287	6.07	-0.23618	-1.99311	normal	very dry
1919	63.533	11.49	0.924198	0.2154	normal	normal
1920	61.12	9.97	-0.32245	-0.40396	normal ext.	normal
1921	65.927	8.78	2.161034	-0.88886	warm	normal
1922	61.513	8.62	-0.11942	-0.95405	normal	normal
1923	63.55	10.83	0.932981	-0.05353	normal ext.	normal
1924	57.523	9.78	-2.18081	-0.48138	cool	normal
1925	61.38	9.84	-0.18813	-0.45693	normal	normal
1926	59.5	11.06	-1.15941	0.040185	cool ext.	normal
1927	57.677	9.77	-2.10125	-0.48546	cool very	normal
1928	58.807	16.78	-1.51744	2.370941	cool	ext. wet
1929	60.52	6.03	-0.63244	-2.00941	normal	ext. dry
1930	62.523	9.6	0.402391	-0.55473	normal	normal
1931	62.847	9.76	0.569783	-0.48953	normal	normal
1932	62.753	13.34	0.521219	0.969228	normal	normal
1933	63.52	7.74	0.917481	-1.31263	normal	dry
1934	60.507	8.1	-0.63915	-1.16594	normal	dry
1935	61.537	12.89	-0.10702	0.785864	normal	normal

1936	63.223	5.92	0.764039	-2.05423	normal ext.	ext. dry
1937	65.69	10.49	2.03859	-0.19208	warm	normal
1938	62.03	8.81	0.147688	-0.87663	normal	normal
1939	61.767	12.36	0.011811	0.569903	normal	normal
1940	60.453	9.01	-0.66705	-0.79514	normal	normal
1941	62.203	11.86	0.237067	0.366165	normal	normal
1942	59.843	10.22	-0.9822	-0.30209	normal	normal
1943	61.37	13.33	-0.19329	0.965153	normal	normal
1944	60.637	19.79	-0.57199	3.59744	normal	ext. wet
1945	58.887	12.54	-1.47611	0.643248	cool	normal
1946	60.203	8.84	-0.79621	-0.86441	normal	normal
1947	60.43	10.08	-0.67894	-0.35914	normal	normal
1948	61.64	10.22	-0.0538	-0.30209	normal	normal
1949	62.847	12.57	0.569783	0.655472	normal ext.	normal
1950	57.483	11.47	-2.20147	0.20725	cool	normal
1951	58.957	11.09	-1.43995	0.05241	cool	normal very
1952	61.94	15.43	0.10119	1.82085	normal	wet
1953	62.647	14.16	0.466455	1.303357	normal	wet
1954	62.037	7.49	0.151304	-1.4145	normal ext.	dry
1955	65.617	11.6	2.000876	0.260222	warm	normal
1956	61.283	8.31	-0.23824	-1.08037	normal	dry
1957	61.683	11.73	-0.03159	0.313193	normal	normal
1958	59.317	11.56	-1.25396	0.243923	cool	normal
1959	63.9	10.2	1.113805	-0.31024	warm	normal
1960	62.087	7.86	0.177136	-1.26373	normal	dry
1961	63.52	6.07	0.917481	-1.99311	normal	very dry
1962	60.187	10.55	-0.80448	-0.16763	normal	normal
1963	62.747	10.81	0.518119	-0.06168	normal	normal
1964	60.9	12.75	-0.43612	0.728818	normal	normal
1965	59.543	9.94	-1.1372	-0.41619	cool	normal
1966	63.017	11.01	0.657611	0.019812	normal	normal
1967	60.427	11.02	-0.68049	0.023886	normal	normal
1968	60.187	14.22	-0.80448	1.327806	normal	wet
1969	60.437	10.47	-0.67532	-0.20022	normal	normal
1970	64.333	8.44	1.33751	-1.0274	warm	dry
1971	61.35	9.43	-0.20363	-0.624	normal	normal
1972	60.957	13.45	-0.40667	1.01405	normal	wet
1973	62.817	12.97	0.554283	0.818462	normal	normal
1974	61.923	11.77	0.092407	0.329492	normal	normal
1975	62.67	10.91	0.478337	-0.02094	normal	normal
1976	64.203	10.58	1.270347	-0.1554	warm	normal
1977	60.38	12.89	-0.70477	0.785864	normal	normal
1978	61.16	13.66	-0.30179	1.09962	normal	wet
1979	60.517	10.16	-0.63399	-0.32654	normal	normal
1980	62.69	11.1	0.48867	0.056484	normal	normal
1981	62.603	10.88	0.443723	-0.03316	normal	normal
1982	59.49	10.13	-1.16458	-0.33877	cool very	normal
1983	64.77	11.15	1.563281	0.076858	warm	normal
1984	63.493	10.41	0.903532	-0.22467	normal	normal

1985	58.553	11.84	-1.64867	0.358016	very cool	normal
1986	60.593	13.1	-0.59472	0.871434	normal	normal
1987	63.723	13.25	1.022359	0.932555	warm very	normal
1988	65.203	16.12	1.786987	2.102007	warm	ext. wet
1989	62.453	10.29	0.366227	-0.27357	normal	normal
1990	62.5	11.26	0.390509	0.12168	normal	normal
1991	63.537	10.87	0.926264	-0.03723	normal ext.	normal
1992	57.627	11.97	-2.12708	0.410987	cool	normal very
1993	60.617	14.68	-0.58232	1.515244	normal	wet
1994	61.347	11.92	-0.20518	0.390614	normal	normal
1995	63.96	10.79	1.144803	-0.06983	warm	normal
1996	61.587	13.24	-0.08118	0.92848	normal	normal
1997	62.037	8.88	0.151304	-0.84811	normal	normal
1998	63.887	9.21	1.107088	-0.71364	warm	normal
1999	63.37	14.49	0.839985	1.437824	normal	wet
2000	61.56	11.62	-0.09513	0.268371	normal	normal
2001	64.337	12.52	1.339576	0.635099	warm very	normal
2002	65.357	12.86	1.866549	0.77364	warm	normal
2003	64.14	10.05	1.237798	-0.37136	warm	normal
2004	59.103	8.33	-1.36452	-1.07222	cool	dry
2005	64.27	8.84	1.304961	-0.86441	warm ext.	normal
2006	65.647	8.05	2.016375	-1.18631	warm	dry

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**Jun-Aug west-central MN**

YEAR	WC_T	WC_P	WC_Tz	WC_Pz	T_class	P_class
1891	65.137	8.61	-1.48176	-0.76982	cool	normal
1892	66.02	11.62	-1.04751	0.463673	cool	normal
1893	68.513	9.52	0.178515	-0.3969	normal	normal
1894	70.403	5.25	1.107994	-2.14675	warm	ext. dry
1895	65.323	10.53	-1.39029	0.016993	cool	normal
1896	66.333	8.88	-0.89358	-0.65918	normal	normal
1897	65.193	13.15	-1.45422	1.090666	cool	wet
1898	66.903	10.19	-0.61326	-0.12234	normal	normal
1899	67.353	14.07	-0.39196	1.467681	normal	wet
1900	69.153	12.66	0.493259	0.889864	normal	normal
1901	69.25	9.3	0.540963	-0.48706	normal	normal
1902	64.757	8.67	-1.66864	-0.74523	cool	normal
1903	64.07	11.61	-2.0065	0.459575	cool	normal
1904	64.04	10.62	-2.02125	0.053874	cool	normal
1905	65.947	13.48	-1.08341	1.225899	cool	wet
1906	66.467	14.1	-0.82768	1.479975	normal	wet
1907	66.037	9.77	-1.03915	-0.29445	cool	normal
1908	65.97	10.85	-1.0721	0.148128	cool	normal
1909	68.34	9.44	0.093436	-0.42969	normal	normal
1910	67.94	6.5	-0.10328	-1.6345	normal	very dry
1911	67.61	11.47	-0.26557	0.402204	normal	normal
1912	65.45	10.94	-1.32783	0.18501	cool	normal
1913	68.38	11.84	0.113107	0.553829	normal	normal
1914	67.87	14.59	-0.1377	1.680776	normal	very wet
1915	62.663	13.32	-2.69845	1.160332	cool	ext. wet
1916	68.383	13.46	0.114582	1.217703	normal	wet
1917	66.413	6.53	-0.85424	-1.6222	normal	very dry
1918	68	7.8	-0.07377	-1.10176	normal	dry
1919	68.73	12.13	0.285233	0.672671	normal	normal
1920	67.01	12.85	-0.56064	0.967726	normal	normal
1921	71.34	8.01	1.5688	-1.0157	very warm	dry
1922	69.3	5.14	0.565552	-2.19182	normal	ext. dry
1923	69.55	9.21	0.688499	-0.52394	normal	normal
1924	65.13	11.61	-1.4852	0.459575	cool	normal
1925	67.36	12.1	-0.38852	0.660377	normal	normal
1926	66.533	9.91	-0.79523	-0.23708	normal	normal
1927	65.04	8.15	-1.52947	-0.95833	very cool	normal
1928	66.367	13.41	-0.87686	1.197213	normal	wet
1929	68.23	5.79	0.039339	-1.92545	normal	very dry
1930	69.947	6.93	0.883739	-1.45828	normal	dry
1931	70.743	9.01	1.275202	-0.6059	warm	normal
1932	70.103	8.37	0.960458	-0.86817	normal	normal
1933	72.19	6.5	1.98682	-1.6345	very warm	very dry
1934	70.097	7.19	0.957507	-1.35174	normal	dry



1935	69.39	12.32	0.609813	0.750533	normal very	normal
1936	72.123	4.71	1.95387	-2.36804	warm	ext. dry
1937	70.593	10.48	1.201434	-0.0035	warm	normal
1938	69.893	7.73	0.857183	-1.13044	normal	dry
1939	69.273	11.31	0.552274	0.336636	normal	normal
1940	68.413	9.66	0.129336	-0.33953	normal	normal
1941	69.663	11.14	0.744071	0.26697	normal	normal
1942	66.617	9.63	-0.75392	-0.35183	normal	normal
1943	69.497	13.56	0.662434	1.258683	normal	wet
1944	68.213	13.26	0.030978	1.135744	normal	wet
1945	66.117	10.13	-0.99981	-0.14693	normal	normal
1946	67.827	11.7	-0.15885	0.496457	normal	normal
1947	69.38	8.66	0.604895	-0.74933	normal	normal
1948	68.683	11.34	0.262119	0.34893	normal	normal
1949	70.557	12.19	1.18373	0.697259	warm	normal
1950	66.353	6.97	-0.88375	-1.44189	normal	dry
1951	65.137	12.85	-1.48176	0.967726	cool	normal
1952	68.617	12.96	0.229661	1.012804	normal	wet very
1953	69.22	14.44	0.526209	1.619306	normal	wet
1954	68.443	8.46	0.14409	-0.83129	normal	normal very
1955	70.843	14.72	1.324381	1.73405	warm	wet
1956	68.533	11.78	0.188351	0.529241	normal	normal very
1957	68.58	15.3	0.211465	1.971733	normal	wet
1958	65.403	9.06	-1.35095	-0.58541	cool	normal
1959	70.807	9.88	1.306677	-0.24938	warm	normal
1960	68.213	12.34	0.030978	0.758729	normal	normal
1961	69.647	7.36	0.736203	-1.28207	normal	dry
1962	66.873	13.49	-0.62802	1.229997	normal	wet
1963	69.47	11.64	0.649156	0.471869	normal	normal
1964	68.61	10.79	0.226218	0.12354	normal	normal
1965	67.21	11.32	-0.46229	0.340734	normal	normal
1966	68.71	11.62	0.275397	0.463673	normal	normal
1967	66.027	9.21	-1.04407	-0.52394	cool	normal
1968	67.687	8.96	-0.2277	-0.62639	normal	normal
1969	66.673	7.3	-0.72638	-1.30666	normal	dry
1970	70.117	7.62	0.967343	-1.17552	normal	dry
1971	67.383	12.61	-0.37721	0.869374	normal	normal
1972	67.363	10.54	-0.38704	0.021091	normal	normal
1973	69.327	8.32	0.57883	-0.88866	normal	normal
1974	68.247	8.86	0.047699	-0.66737	normal	normal
1975	69.477	11.53	0.652599	0.426791	normal very	normal
1976	71.513	5.11	1.653879	-2.20412	warm	ext. dry
1977	67.457	10.71	-0.34081	0.090756	normal	normal
1978	68.137	10.05	-0.0064	-0.17971	normal	normal
1979	66.773	11.86	-0.6772	0.562025	normal	normal
1980	68.187	10.97	0.018192	0.197304	normal	normal
1981	67.67	12.9	-0.23606	0.988216	normal	normal
1982	66.88	9.95	-0.62458	-0.22069	normal	normal
1983	71.247	11.61	1.523064	0.459575	very	normal

					warm	
1984	69.543	11.99	0.685057	0.615299	normal	normal
1985	65.337	11.05	-1.3834	0.230088	cool	normal very
1986	68.157	14.29	0.003438	1.557837	normal	wet
1987	69.85	7.56	0.836036	-1.20011	normal ext.	dry
1988	73.43	7.63	2.596637	-1.17142	warm	dry
1989	69.553	9.6	0.689975	-0.36412	normal	normal
1990	68.31	11.75	0.078682	0.516947	normal	normal
1991	70.03	13.75	0.924558	1.336545	normal ext.	wet
1992	63.44	11.47	-2.31633	0.402204	cool	normal
1993	65.76	15.89	-1.17538	2.213515	cool	ext. wet
1994	67.05	10.15	-0.54097	-0.13873	normal	normal
1995	70.36	12.39	1.086848	0.779219	warm	normal
1996	68.553	7.14	0.198186	-1.37223	normal	dry
1997	69.427	10.53	0.628009	0.016993	normal	normal
1998	69.017	10.74	0.426376	0.10305	normal	normal
1999	69.967	12.66	0.893575	0.889864	normal	normal
2000	68.403	9.87	0.124418	-0.25347	normal	normal
2001	70.7	10.01	1.254056	-0.1961	warm	normal
2002	71.187	12.76	1.493556	0.930844	warm	normal
2003	69.84	8.59	0.831118	-0.77802	normal very	normal
2004	64.533	9.75	-1.7788	-0.30265	cool	normal
2005	69.813	13.75	0.817839	1.336545	normal	wet
2006	70.48	7.36	1.145862	-1.28207	warm	dry

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## Jun-Aug central MN

YEAR	C_T	C_P	C_Tz	C_Pz	T_class	P_class
1891	65.067	9.52	-1.49994	-0.63894	cool	normal
1892	65.707	15.59	-1.17931	1.475009	cool	wet
1893	68.653	8.02	0.296623	-1.16133	normal	dry
1894	70.32	4.47	1.13178	-2.39766	warm	ext. dry
1895	66.307	9.09	-0.87871	-0.78869	normal	normal
1896	66.81	8.31	-0.62671	-1.06034	normal	dry
					very	very
1897	64.88	15.67	-1.59363	1.502869	cool	wet
1898	66.903	9.7	-0.58012	-0.57625	normal	normal
1899	67.44	12.52	-0.31108	0.405845	normal	normal
1900	69.497	13.19	0.719462	0.63918	normal	normal
1901	69.517	9.81	0.729482	-0.53794	normal	normal
					very	
1902	64.53	10.96	-1.76898	-0.13744	cool	normal
					ext.	
1903	64.06	12.49	-2.00444	0.395397	cool	normal
					very	
1904	64.153	11.81	-1.95785	0.158579	cool	normal
1905	65.517	15.43	-1.27449	1.419287	cool	wet
1906	66.867	14.39	-0.59815	1.057094	normal	wet
1907	66.5	10.73	-0.78202	-0.21754	normal	normal
1908	66.407	10.7	-0.82861	-0.22799	normal	normal
1909	68.74	9.83	0.34021	-0.53098	normal	normal
1910	68.603	5.34	0.271573	-2.09467	normal	ext. dry
1911	68.127	12.2	0.0331	0.294401	normal	normal
1912	65.85	11.83	-1.10766	0.165544	cool	normal
1913	69.037	14.41	0.489005	1.06406	normal	wet
1914	68.36	14.94	0.149832	1.248638	normal	wet
					ext.	
1915	62.763	12.37	-2.65423	0.353606	cool	normal
1916	68.53	13.2	0.235001	0.642663	normal	normal
1917	65.913	9.36	-1.0761	-0.69466	cool	normal
1918	67.81	8.41	-0.12571	-1.02551	normal	dry
1919	68.993	12.37	0.466961	0.353606	normal	normal
1920	67.473	11.25	-0.29455	-0.03645	normal	normal
					very	
1921	71.48	8.52	1.712933	-0.9872	warm	normal
1922	68.903	5.93	0.421872	-1.8892	normal	very dry
1923	69.427	9.38	0.684393	-0.6877	normal	normal
1924	65.323	13.27	-1.37169	0.667041	cool	normal
1925	67.57	11.84	-0.24595	0.169027	normal	normal
1926	66.607	11.53	-0.72841	0.061066	normal	normal
					very	
1927	64.747	7.95	-1.66026	-1.18571	cool	dry
1928	66.373	13	-0.84564	0.573011	normal	normal
1929	68.083	6.5	0.011056	-1.69069	normal	very dry
1930	70.213	7.24	1.078174	-1.43298	warm	dry
1931	71.01	8.61	1.477466	-0.95586	warm	normal
1932	70.333	9.24	1.138293	-0.73645	warm	normal
					ext.	
1933	72.247	6.27	2.097196	-1.77079	warm	very dry
1934	69.9	7.9	0.921363	-1.20312	normal	dry

1935	69.327	13.67	0.634293	0.806346	normal very	normal
1936	71.247	5.84	1.596202	-1.92054	warm	very dry
1937	70.533	11.05	1.238492	-0.1061	warm	normal
1938	69.537	9.25	0.739502	-0.73297	normal	normal
1939	68.933	12.64	0.436901	0.447636	normal	normal
1940	67.907	11.67	-0.07712	0.109823	normal	normal
1941	69.057	11.2	0.499025	-0.05386	normal	normal
1942	66.227	10.63	-0.91879	-0.25237	normal	normal
1943	69.387	11.69	0.664353	0.116788	normal	normal
1944	67.577	14.86	-0.24245	1.220777	normal	wet
1945	65.237	13.2	-1.41477	0.642663	cool	normal
1946	67.12	9.62	-0.4714	-0.60411	normal	normal
1947	69.277	10.1	0.609243	-0.43695	normal	normal
1948	68.443	11.6	0.191414	0.085444	normal	normal
1949	70.92	10.85	1.432377	-0.17575	warm	normal
1950	66.25	5.05	-0.90727	-2.19567	normal	ext. dry
1951	65.087	14.83	-1.48992	1.21033	cool	wet very
1952	68.09	16.91	0.014563	1.934714	normal	wet very
1953	69.123	17.06	0.53209	1.986953	normal	wet
1954	68.583	11.13	0.261553	-0.07824	normal	normal
1955	70.987	15.45	1.465943	1.426252	warm	wet
1956	68.213	15.25	0.076186	1.3566	normal	wet
1957	68.193	18.38	0.066166	2.446659	normal	ext. wet very
1958	64.957	9.56	-1.55505	-0.62501	cool	normal
1959	70.163	10.53	1.053124	-0.2872	warm	normal
1960	67.71	10.28	-0.17581	-0.37426	normal	normal
1961	68.773	8.78	0.356742	-0.89665	normal	normal
1962	66.357	12.74	-0.85366	0.482463	normal	normal
1963	69.25	11.52	0.595717	0.057583	normal	normal
1964	68.573	11.11	0.256544	-0.0852	normal	normal
1965	66.947	11.97	-0.55807	0.214301	normal	normal
1966	68.55	11.36	0.245021	0.001861	normal	normal
1967	66.053	11.69	-1.00596	0.116788	cool	normal
1968	67.613	11.72	-0.22441	0.127236	normal	normal
1969	66.657	7.71	-0.70336	-1.26929	normal	dry
1970	69.9	8.69	0.921363	-0.928	normal	normal
1971	67.263	11.74	-0.39976	0.134201	normal	normal
1972	66.93	14.81	-0.56659	1.203364	normal	wet
1973	69.023	11.11	0.481991	-0.0852	normal	normal
1974	67.87	9.7	-0.09566	-0.57625	normal	normal
1975	69.103	11.15	0.52207	-0.07127	normal	normal
1976	70.263	6.94	1.103224	-1.53746	warm	very dry
1977	67.57	12.6	-0.24595	0.433706	normal	normal
1978	67.76	13.09	-0.15076	0.604354	normal	normal
1979	66.707	12.41	-0.67831	0.367536	normal	normal
1980	68.233	12.44	0.086206	0.377984	normal	normal
1981	67.55	14.3	-0.25597	1.025751	normal	wet
1982	66.857	9.23	-0.60316	-0.73994	normal	normal very
1983	71.11	13.45	1.527566	0.729728	warm	normal

1984	69.44	13.34	0.690905	0.69142	normal	normal
1985	65.347	13.49	-1.35966	0.743659	cool	normal very
1986	67.95	15.87	-0.05558	1.572522	normal	wet
1987	70.157	10.35	1.050118	-0.34988	warm ext.	normal
1988	73.11	7.3	2.529554	-1.41208	warm	dry
1989	69.217	9.71	0.579184	-0.57277	normal	normal
1990	68.257	14.96	0.098229	1.255604	normal	wet
1991	70.057	13	1.000019	0.573011	warm ext.	normal
1992	63.3	11.71	-2.3852	0.123753	cool	normal
1993	66.03	17.37	-1.01748	2.094914	cool	ext. wet
1994	66.853	11.99	-0.60517	0.221266	normal	normal
1995	70.163	13.65	1.053124	0.799381	warm	normal
1996	67.617	7.96	-0.22241	-1.18223	normal	dry
1997	69.057	14.68	0.499025	1.15809	normal	wet
1998	68.793	12.19	0.366762	0.290919	normal	normal
1999	69.67	12.93	0.806134	0.548632	normal	normal
2000	68.313	10.16	0.126285	-0.41605	normal	normal
2001	70.443	8.86	1.193403	-0.86879	warm	normal
2002	70.82	19.28	1.382277	2.760094	warm	ext. wet
2003	69.55	9.92	0.746015	-0.49964	normal very	normal
2004	64.837	10.13	-1.61517	-0.4265	cool	normal
2005	70.587	11.97	1.265546	0.214301	warm	normal
2006	70.953	8.67	1.44891	-0.93496	warm	normal

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## Jun-Aug east-central MN

YEAR	EC_T	EC_P	EC_Tz	EC_Pz	T_class	P_class
1891	63.453	9.57	-1.39384	-0.71699	cool	normal
1892	66.12	14.86	0.034417	1.008668	normal	wet
1893	68.093	8.48	1.09102	-1.07256	warm very	dry
1894	69.127	3	1.644759	-2.8602	warm	ext. dry
1895	64.79	9.04	-0.67784	-0.88988	normal	normal
1896	66.127	7.92	0.038166	-1.25524	normal	dry very
1897	64.73	16.82	-0.70997	1.648043	normal	wet
1898	65.74	11.17	-0.16908	-0.19505	normal	normal
1899	66.667	14.29	0.327353	0.822728	normal	normal
1900	68.393	15.02	1.25168	1.060862	warm	wet
1901	67.683	12.87	0.871452	0.359507	normal	normal
1902	64.52	13.14	-0.82243	0.447585	normal very	normal
1903	63.14	13.74	-1.56147	0.643311	cool	normal
1904	63.637	11.81	-1.29531	0.013723	cool	normal
1905	65.373	16.01	-0.36562	1.383811	normal	wet
1906	65.727	11.5	-0.17605	-0.0874	normal	normal
1907	65.197	9.74	-0.45988	-0.66153	normal	normal
1908	64.72	12.09	-0.71533	0.105063	normal	normal
1909	66.7	11.81	0.345025	0.013723	normal	normal
1910	66.673	6.17	0.330566	-1.82611	normal	very dry
1911	65.167	11.81	-0.47594	0.013723	normal very	normal
1912	63.057	9.89	-1.60591	-0.6126	cool	normal
1913	66.097	12.81	0.0221	0.339935	normal	normal
1914	65.597	15.54	-0.24567	1.230492	normal ext.	wet
1915	61.01	11.39	-2.70215	-0.12329	cool	normal
1916	66.457	11.4	0.214891	-0.12002	normal very	normal
1917	62.79	9.34	-1.7489	-0.79202	cool	normal
1918	65.207	7.85	-0.45452	-1.27807	normal	dry
1919	66.663	12.19	0.325211	0.137684	normal	normal
1920	64.853	10.76	-0.6441	-0.3288	normal very	normal
1921	69.54	9.5	1.865934	-0.73982	warm	normal
1922	66.377	7.78	0.172049	-1.30091	normal	dry
1923	66.85	9.99	0.425355	-0.57998	normal very	normal
1924	62.92	13.8	-1.67928	0.662884	cool	normal
1925	65.413	11.75	-0.3442	-0.00585	normal	normal
1926	64.187	10.95	-1.00076	-0.26682	cool very	normal
1927	62.46	9.43	-1.92563	-0.76266	cool	normal
1928	63.973	14.63	-1.11537	0.93364	cool	normal
1929	66.023	6.25	-0.01753	-1.80001	normal	very dry
1930	68.23	7.2	1.164388	-1.49011	warm	dry
1931	68.453	11.58	1.283811	-0.06131	warm	normal
1932	68.68	8.32	1.405377	-1.12475	warm	dry
1933	70.073	5.89	2.151372	-1.91745	ext.	very dry

					warm	
1934	66.59	8.58	0.286117	-1.03994	normal	dry
1935	66.703	14.98	0.346632	1.047814	normal	wet
1936	68.16	4.61	1.126901	-2.335	warm	ext. dry
1937	68.13	10.6	1.110835	-0.38099	warm	normal
1938	67.373	10.38	0.705438	-0.45276	normal	normal
1939	67.207	11.2	0.61654	-0.18527	normal	normal
1940	65.67	10.21	-0.20657	-0.50821	normal	normal
1941	67.327	13.01	0.680803	0.405177	normal	normal
1942	64.633	11.83	-0.76192	0.020248	normal	normal
1943	67.54	12.48	0.794871	0.232285	normal	normal
1944	65.99	19.54	-0.0352	2.535338	normal	ext. wet
1945	63.347	14.81	-1.45061	0.992358	cool	normal
1946	65.15	12	-0.48505	0.075704	normal	normal
1947	67.493	9.4	0.769701	-0.77245	normal	normal
1948	66.537	10.86	0.257734	-0.29618	normal	normal
1949	68.67	12.14	1.400022	0.121373	warm	normal
1950	63.953	6.03	-1.12608	-1.87178	cool	very dry
1951	63.28	15.96	-1.48649	1.367501	cool	wet
1952	66.23	19.98	0.093326	2.678871	normal	ext. wet very
1953	67.233	17.77	0.630463	1.957943	normal	wet
1954	66.327	12.37	0.145272	0.196402	normal	normal very
1955	69.263	16.95	1.717592	1.69045	warm	wet
1956	65.473	11.62	-0.31207	-0.04826	normal	normal
1957	66.233	15.3	0.094932	1.152201	normal	wet very
1958	62.85	12.51	-1.71677	0.242071	cool	normal
1959	67.883	10.23	0.978559	-0.50169	normal	normal
1960	66.02	9.39	-0.01914	-0.77571	normal	normal
1961	67.1	6.61	0.559238	-1.68258	normal	very dry
1962	64.287	11.45	-0.94721	-0.10371	normal	normal
1963	66.963	10.67	0.48587	-0.35816	normal	normal
1964	65.853	12.05	-0.10857	0.092014	normal	normal
1965	64.04	12.81	-1.07949	0.339935	cool	normal
1966	66.51	12.71	0.243274	0.307314	normal	normal
1967	64.067	12.18	-1.06503	0.134422	cool	normal
1968	65.087	13.08	-0.51879	0.428012	normal	normal
1969	64.623	8.3	-0.76727	-1.13128	normal	dry
1970	67.873	8	0.973203	-1.22914	normal	dry
1971	64.87	10.77	-0.635	-0.32554	normal	normal very
1972	64.527	17.36	-0.81868	1.824197	normal	wet
1973	66.753	12.72	0.373408	0.310576	normal	normal
1974	65.557	12.45	-0.26709	0.222499	normal	normal
1975	66.67	14.22	0.328959	0.799893	normal	normal
1976	67.843	8.61	0.957137	-1.03015	normal	dry
1977	64.89	14.07	-0.62429	0.750961	normal	normal very
1978	65.153	17.01	-0.48344	1.710023	normal	wet
1979	64.293	11.8	-0.944	0.010461	normal	normal
1980	65.997	12.22	-0.03145	0.14747	normal	normal
1981	65.183	14.06	-0.46738	0.747699	normal	normal

1982	64.233	8.93	-0.97613	-0.92577	normal	normal
1983	68.577	12.67	1.350217	0.294265	warm	normal
1984	67.203	12.58	0.614397	0.264906	normal very	normal
1985	62.987	12.83	-1.6434	0.346459	cool	normal
1986	65.6	15.75	-0.24406	1.298996	normal	wet
1987	68.343	10.55	1.224903	-0.3973	warm ext.	normal
1988	69.923	9.15	2.071042	-0.854	warm	normal
1989	66.95	10.09	0.478908	-0.54736	normal	normal
1990	66.52	14.88	0.24863	1.015192	normal	wet
1991	67.873	12.75	0.973203	0.320362	normal ext.	normal
1992	61.893	11.74	-2.22927	-0.00911	cool	normal
1993	64.67	15.97	-0.7421	1.370763	normal	wet
1994	65.33	11.87	-0.38865	0.033296	normal	normal
1995	68.393	16.02	1.25168	1.387073	warm	wet
1996	65.807	10.16	-0.1332	-0.52453	normal	normal
1997	66.143	13.18	0.046734	0.460633	normal	normal
1998	66.55	11.73	0.264696	-0.01237	normal	normal
1999	67.79	15.88	0.928754	1.341404	normal	wet
2000	65.83	11.52	-0.12089	-0.08088	normal	normal
2001	68.553	11.04	1.337365	-0.23746	warm	normal
2002	68.5	18.46	1.308981	2.183029	warm	ext. wet
2003	67.723	11.07	0.892874	-0.22767	normal very	normal
2004	63.087	9.36	-1.58985	-0.78549	cool	normal
2005	68.603	11.15	1.364141	-0.20158	warm very	normal
2006	69.293	8.76	1.733658	-0.98122	warm	normal



### Jun-Aug southwest MN

YEAR	SW_T	SW_P	SW_Tz	SW_Pz	T_class	P_class
1891	66.297	9.54	-1.58577	-0.46493	cool	normal
1892	66.573	12.47	-1.44903	0.60335	cool	normal
1893	69.58	6.49	0.040745	-1.57696	normal	very dry
1894	72.653	3.94	1.563221	-2.50669	warm	ext. dry
1895	68.23	7.79	-0.62809	-1.10298	normal	dry
1896	67.853	9.14	-0.81487	-0.61077	normal	normal
1897	66.51	12.2	-1.48024	0.504908	cool	normal
1898	68.513	9.36	-0.48789	-0.53056	normal	normal
1899	69.183	13	-0.15594	0.796588	normal	normal
1900	70.663	11.56	0.577303	0.271564	normal	normal
1901	71.933	8.77	1.206507	-0.74567	warm	normal
1902	66.59	13.5	-1.44061	0.978888	cool	normal
1903	65.273	15.43	-2.0931	1.682565	ext. cool	very wet
1904	65.417	12.19	-2.02176	0.501262	cool	ext. normal
1905	68.48	14.44	-0.50423	1.321612	normal	wet
1906	68.127	10.99	-0.67912	0.063742	normal	normal
1907	68.037	14.24	-0.72371	1.248692	normal	wet
1908	66.75	12.77	-1.36134	0.71273	cool	normal
1909	69.577	10.91	0.039259	0.034574	normal	normal
1910	69.033	7.94	-0.23026	-1.04829	normal	dry
1911	69.473	10.33	-0.01227	-0.17689	normal	normal
1912	66.593	8.48	-1.43912	-0.8514	cool	normal
1913	70.16	11.56	0.328098	0.271564	normal	normal
1914	70.107	14.94	0.30184	1.503912	ext. normal	very wet
1915	63.987	12.69	-2.73023	0.683562	cool	ext. normal
1916	69.593	8.88	0.047186	-0.70556	normal	normal
1917	66.84	8.85	-1.31675	-0.7165	cool	normal
1918	69.48	12.1	-0.0088	0.468448	normal	normal
1919	69.977	14.31	0.237434	1.274214	normal	wet
1920	67.863	13.47	-0.80992	0.96795	normal	normal
1921	72.54	8.52	1.507237	-0.83682	very warm	normal
1922	70.48	7.04	0.486638	-1.37643	warm	dry
1923	70.39	10.8	0.442049	-0.00553	normal	normal
1924	67.103	12.65	-1.18645	0.668978	cool	normal
1925	69.727	10.89	0.113574	0.027282	normal	normal
1926	69.353	9.65	-0.07172	-0.42482	normal	normal
1927	66.537	6.37	-1.46687	-1.62071	cool	very dry
1928	68.087	11.99	-0.69894	0.428342	normal	normal
1929	69.557	8.37	0.02935	-0.89151	normal	normal
1930	71.59	6.61	1.036572	-1.53321	warm	very dry
1931	73.44	7.01	1.953129	-1.38737	very warm	dry
1932	71.55	10.49	1.016755	-0.11856	warm	normal
1933	73.457	8.58	1.961552	-0.81494	very warm	normal

1934	71.937	10.81	1.208489	-0.00189	warm	normal
1935	71.283	10.75	0.884473	-0.02376	normal	normal
					ext.	
1936	73.96	6.75	2.210756	-1.48216	warm	dry
1937	72.08	9.36	1.279336	-0.53056	warm	normal
1938	71.687	9.91	1.08463	-0.33003	warm	normal
1939	71.07	13.37	0.778945	0.93149	normal	normal
1940	70.553	11.54	0.522805	0.264272	normal	normal
1941	71.253	9.89	0.86961	-0.33732	normal	normal
1942	68.69	11.05	-0.40019	0.085618	normal	normal
1943	70.563	17.4	0.527759	2.400827	normal	ext. wet
1944	68.947	14.88	-0.27287	1.482036	normal	wet
1945	66.693	11.64	-1.38958	0.300732	cool	normal
1946	68.747	8.41	-0.37195	-0.87693	normal	normal
1947	70.333	11.02	0.413809	0.07468	normal	normal
1948	69.833	10.46	0.166091	-0.1295	normal	normal
1949	72.063	9.37	1.270914	-0.52691	warm	normal
1950	66.99	6.31	-1.24243	-1.64259	cool	very dry
					very	
1951	66.21	12.7	-1.62887	0.687208	cool	normal
1952	70.01	11.39	0.253783	0.209582	normal	normal
1953	70.617	14.16	0.554513	1.219524	normal	wet
1954	70.56	10.07	0.526273	-0.27169	normal	normal
					very	
1955	72.607	9.42	1.540431	-0.50868	warm	normal
1956	70.27	13.06	0.382596	0.818464	normal	normal
1957	69.803	16.43	0.151228	2.047165	normal	ext. wet
1958	67.39	8.43	-1.04426	-0.86963	cool	normal
1959	72.147	8.84	1.31253	-0.72015	warm	normal
1960	69.007	11.57	-0.24314	0.27521	normal	normal
1961	69.52	9.83	0.011019	-0.35919	normal	normal
1962	68.14	13.11	-0.67268	0.836694	normal	normal
1963	70.74	14.91	0.615451	1.492974	normal	wet
1964	69.81	9.8	0.154696	-0.37013	normal	normal
1965	68.903	7.66	-0.29466	-1.15038	normal	dry
1966	70.317	9.2	0.405882	-0.58889	normal	normal
1967	67.56	11.33	-0.96004	0.187706	normal	normal
1968	69.4	12.71	-0.04843	0.690854	normal	normal
1969	67.87	11.91	-0.80645	0.399174	normal	normal
1970	70.657	9.56	0.57433	-0.45764	normal	normal
1971	69.317	10.38	-0.08955	-0.15866	normal	normal
1972	68.16	9.53	-0.66277	-0.46857	normal	normal
1973	71.173	6.04	0.829975	-1.74103	normal	very dry
1974	69.613	7.47	0.057095	-1.21965	normal	dry
1975	70.753	9.14	0.621892	-0.61077	normal	normal
1976	71.81	5.99	1.145568	-1.75926	warm	very dry
1977	69.1	11.95	-0.19706	0.413758	normal	normal
1978	69.4	10.49	-0.04843	-0.11856	normal	normal
1979	68.25	16.31	-0.61818	2.003413	normal	ext. wet
1980	70.36	10.59	0.427186	-0.0821	normal	normal
1981	69.283	13.84	-0.1064	1.102852	normal	wet
1982	68.21	9.74	-0.638	-0.39201	normal	normal
1983	72.797	10.7	1.634564	-0.04199	very	normal

					warm	
1984	70.487	12.14	0.490106	0.483032	normal	normal
					very	
1985	66.46	10.81	-1.50502	-0.00189	cool	normal
1986	68.84	12.72	-0.32588	0.6945	normal	normal
1987	70.673	10.01	0.582257	-0.29357	normal	normal
					ext.	
1988	73.723	6.02	2.093338	-1.74832	warm	very dry
1989	70.47	9.41	0.481684	-0.51233	normal	normal
1990	69.46	11.42	-0.01871	0.22052	normal	normal
1991	70.853	12.73	0.671436	0.698146	normal	normal
					ext.	very
1992	64.357	15.04	-2.54692	1.540372	cool	wet
1993	67.363	22.78	-1.05764	4.362374	cool	ext. wet
1994	67.82	14.04	-0.83122	1.175772	normal	wet
1995	71.15	11.87	0.81858	0.38459	normal	normal
1996	68.543	10.6	-0.47302	-0.07845	normal	normal
1997	70.197	10.45	0.34643	-0.13314	normal	normal
1998	69.323	11.15	-0.08658	0.122078	normal	normal
1999	70.76	9.37	0.62536	-0.52691	normal	normal
2000	69.373	9.9	-0.06181	-0.33367	normal	normal
2001	71.243	8.86	0.864656	-0.71286	normal	normal
2002	72.053	12.73	1.265959	0.698146	warm	normal
2003	70.077	7.79	0.286977	-1.10298	normal	dry
					very	
2004	66.233	11.04	-1.61748	0.081972	cool	normal
2005	71.203	11.78	0.844838	0.351776	normal	normal
2006	71.477	9.47	0.980588	-0.49045	normal	Normal

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### Jun-Aug south-central MN

YEAR	SC_T	SC_P	SC_Tz	SC_Pz	T_class	P_class
1891	65.76	10	-1.96017	-0.67779	very cool	normal
1892	66.377	14.85	-1.64705	0.917238	very cool	normal
1893	69.287	8.21	-0.17023	-1.26647	normal	dry
1894	72.39	4.75	1.404526	-2.40436	warm	ext. dry
1895	68.483	8.35	-0.57826	-1.22042	normal	dry
1896	68.847	7.16	-0.39353	-1.61178	normal	very dry
1897	66.933	12.97	-1.36488	0.298961	cool	normal
1898	68.373	10.09	-0.63409	-0.64819	normal	normal
1899	69.907	15.66	0.144413	1.183624	normal	wet
1900	71.643	11.65	1.025426	-0.13515	warm	normal
1901	73.133	9.67	1.781595	-0.78631	very warm	normal
1902	66.763	17.35	-1.45115	1.739416	warm	very wet
1903	66.177	13.36	-1.74855	0.42722	cool	normal
1904	66.093	11.15	-1.79118	-0.29958	very cool	normal
1905	68.91	12.97	-0.36156	0.298961	cool	normal
1906	68.473	14.33	-0.58334	0.746225	normal	normal
1907	67.587	15.41	-1.03298	1.101406	normal	wet
1908	67.81	15.05	-0.91981	0.983012	cool	normal
1909	70.083	12.06	0.233733	-0.00031	normal	normal
1910	69.683	6.98	0.030734	-1.67098	normal	very dry
1911	70.25	11.41	0.318484	-0.21408	normal	normal
1912	67.337	11.63	-1.15985	-0.14173	normal	normal
1913	71.223	11.88	0.812278	-0.05951	cool	normal
1914	70.683	15.27	0.53823	1.055364	normal	wet
1915	64.453	12.77	-2.62347	0.233187	ext. cool	normal
1916	70.373	11.64	0.380906	-0.13844	normal	normal
1917	67.71	10.35	-0.97056	-0.56268	normal	normal
1918	69.54	14.57	-0.04184	0.825154	normal	normal
1919	70.597	14.37	0.494586	0.75938	normal	normal
1920	68.31	9.84	-0.66606	-0.73041	normal	normal
1921	73.303	9	1.86787	-1.00666	very warm	dry
1922	70.39	7.27	0.389534	-1.5756	normal	very dry
1923	70.633	11.39	0.512855	-0.22066	normal	normal
1924	66.533	14.84	-1.56788	0.91395	very normal	normal
1925	68.987	13.33	-0.32248	0.417354	cool	normal
1926	68.663	8.43	-0.48691	-1.19411	normal	dry
1927	66.23	6.32	-1.72165	-1.88803	very normal	very dry
1928	67.937	13.61	-0.85535	0.509438	cool	normal
1929	69.07	9.1	-0.28036	-0.97377	normal	normal
1930	71.043	10	0.720929	-0.67779	normal	normal
1931	73.033	8.23	1.730846	-1.25989	very normal	dry
1932	71.517	10.62	0.961482	-0.47389	warm	normal

1933	73.183	7.1	1.80697	-1.63151	warm	very dry
1934	72.19	9.41	1.303027	-0.87182	warm	normal
1935	70.353	13.26	0.370756	0.394333	normal	normal
					very	
1936	73.157	7.11	1.793775	-1.62822	warm	very dry
1937	72.157	9.67	1.286279	-0.78631	warm	normal
1938	71.267	10.02	0.834608	-0.67121	normal	normal
1939	71.127	10.6	0.763558	-0.48046	normal	normal
1940	70.083	15.69	0.233733	1.19349	normal	wet
1941	70.797	9.67	0.596085	-0.78631	normal	normal
1942	68.877	11.11	-0.37831	-0.31274	normal	normal
					very	
1943	70.993	17.93	0.695554	1.930161	normal	wet
1944	69.343	16.27	-0.14181	1.384235	normal	wet
1945	66.957	13.85	-1.3527	0.588367	cool	normal
1946	69.05	8.91	-0.29051	-1.03626	normal	dry
1947	70.78	13.17	0.587457	0.364735	normal	normal
1948	70.277	11.84	0.332187	-0.07266	normal	normal
					very	
1949	73.147	9.5	1.7887	-0.84222	warm	normal
1950	67.493	9.09	-1.08068	-0.97706	cool	normal
1951	66.947	14.97	-1.35777	0.956703	cool	normal
1952	70.35	14.42	0.369234	0.775824	normal	normal
1953	71.233	14.72	0.817353	0.874485	normal	normal
1954	70.903	12.46	0.649879	0.131237	normal	normal
					very	
1955	72.673	11.75	1.548147	-0.10226	warm	normal
1956	70.077	16.03	0.230688	1.305306	normal	wet
1957	70.553	15.32	0.472256	1.071808	normal	wet
1958	67.507	8.69	-1.07358	-1.10861	cool	dry
1959	71.82	12.95	1.115253	0.292383	warm	normal
1960	69.237	10.51	-0.19561	-0.51006	normal	normal
1961	69.677	11.58	0.027689	-0.15817	normal	normal
1962	68.03	14.8	-0.80816	0.900795	normal	normal
1963	70.393	13.69	0.391056	0.535748	normal	normal
1964	70.16	10.77	0.27281	-0.42456	normal	normal
1965	68.737	11.29	-0.44936	-0.25354	normal	normal
1966	69.867	11.25	0.124113	-0.2667	normal	normal
1967	67.34	14.32	-1.15833	0.742937	cool	normal
					very	
1968	69.103	17.6	-0.26361	1.821634	normal	wet
1969	68.093	10.69	-0.77618	-0.45087	normal	normal
1970	70.577	8.48	0.484436	-1.17767	normal	dry
1971	69.223	9.76	-0.20271	-0.75672	normal	normal
1972	68.16	10.41	-0.74218	-0.54295	normal	normal
1973	70.737	9.47	0.565635	-0.85209	normal	normal
1974	69.183	10.37	-0.22301	-0.5561	normal	normal
1975	70.77	10.72	0.582382	-0.441	normal	normal
1976	71.027	7.94	0.712809	-1.35526	normal	dry
1977	69.26	12.38	-0.18394	0.104927	normal	normal
1978	69.057	12.7	-0.28696	0.210166	normal	normal
					very	
1979	68.427	18.07	-0.60668	1.976203	normal	wet

1980	70.317	11.45	0.352487	-0.20092	normal	normal very
1981	69.237	18.01	-0.19561	1.956471	normal	wet
1982	68.093	10.47	-0.77618	-0.52322	normal very	normal
1983	72.917	11.41	1.671976	-0.21408	warm	normal
1984	70.49	11.91	0.440283	-0.04964	normal	normal
1985	66.673	10.6	-1.49683	-0.48046	cool	normal
1986	69.15	15.28	-0.23976	1.058653	normal	wet
1987	71.343	13.35	0.873178	0.423932	normal ext.	normal
1988	74.21	6.55	2.328169	-1.81239	warm	very dry
1989	70.523	9.9	0.457031	-0.71067	normal	normal very
1990	69.887	17.45	0.134263	1.772303	normal	wet
1991	71.39	14.6	0.89703	0.83502	normal ext.	normal
1992	64.807	13.9	-2.44382	0.604811	cool	normal
1993	67.653	23.4	-0.99948	3.729085	normal	ext. wet
1994	67.81	14.85	-0.91981	0.917238	normal	normal
1995	71.677	13.17	1.042681	0.364735	warm	normal
1996	68.357	12.52	-0.64221	0.150969	normal	normal
1997	69.73	14.91	0.054586	0.936971	normal	normal
1998	69.347	13.43	-0.13978	0.450241	normal	normal
1999	70.343	13.74	0.365682	0.552191	normal	normal
2000	69.067	14.2	-0.28188	0.703472	normal	normal
2001	71.083	10.37	0.741229	-0.5561	normal	normal
2002	71.49	16.1	0.947779	1.328327	normal	wet
2003	70.213	9	0.299707	-1.00666	normal very	dry
2004	66.1	14.62	-1.78762	0.841598	cool	normal
2005	71.69	12.03	1.049279	-0.01018	warm	normal
2006	71.727	11.65	1.068056	-0.13515	warm	normal

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### Jun-Aug southeast MN

YEAR	SW_T	SW_P	SW_Tz	SW_Pz	T_class ext.	P_class
1891	64.893	11.45	-2.04492	-0.23486	cool	Normal
1892	67.04	15.23	-0.94713	0.912681	normal	Normal
1893	69.63	8.1	0.377173	-1.25185	normal	Dry
1894	71.597	4.6	1.382926	-2.31439	warm	ext. dry
1895	68.13	9.89	-0.3898	-0.70844	normal	Normal
1896	68.61	8.83	-0.14437	-1.03024	normal	Dry
1897	66.813	13.39	-1.0632	0.354091	cool	Normal
1898	68.833	8.06	-0.03034	-1.264	normal	Dry
1899	69.173	16.93	0.143503	1.428769	normal	Wet
1900	70.977	12.58	1.065912	0.10819	warm very	Normal
1901	72.11	10.99	1.64523	-0.3745	warm	Normal
1902	66.88	15.51	-1.02894	0.997683	cool very	Normal
1903	65.717	12.8	-1.6236	0.174978	cool very	Normal
1904	65.803	11.58	-1.57962	-0.19539	cool	Normal
1905	68.03	12.92	-0.44093	0.211408	normal	Normal
1906	68.567	10.43	-0.16635	-0.54451	normal	Normal
1907	67.11	15.94	-0.91134	1.128223	normal	Wet
1908	67.22	12.99	-0.85509	0.232658	normal	normal
1909	69.617	11.11	0.370526	-0.33807	normal	normal
1910	70.433	5.16	0.787758	-2.14438	normal	ext. dry
1911	69.847	13.92	0.488128	0.514989	normal very	normal
1912	65.877	12.01	-1.54179	-0.06485	cool	normal
1913	70.69	11.45	0.919165	-0.23486	normal	normal
1914	69.64	16.1	0.382286	1.176796	normal ext.	wet
1915	63.703	13.71	-2.65338	0.451237	cool	normal
1916	69.547	9.89	0.334734	-0.70844	normal	normal
1917	65.997	12.31	-1.48043	0.026223	cool	normal
1918	67.933	11.14	-0.49053	-0.32897	normal	normal
1919	69.29	11.82	0.203326	-0.12253	normal	normal
1920	67.67	11.68	-0.625	-0.16503	normal very	normal
1921	72.367	7.66	1.776638	-1.38543	warm	dry
1922	68.957	8.5	0.033059	-1.13042	normal	dry
1923	70.317	10.38	0.728445	-0.55969	normal very	normal
1924	65.723	15.95	-1.62053	1.131259	cool	wet
1925	68.103	15.87	-0.4036	1.106973	normal	wet
1926	67.54	9.65	-0.69147	-0.7813	normal ext.	normal
1927	64.893	6.61	-2.04492	-1.70419	cool	very dry
1928	67.52	16.51	-0.7017	1.301265	normal	wet
1929	68.183	8.98	-0.3627	-0.9847	normal	normal
1930	70.137	10.52	0.636409	-0.51719	normal very	normal
1931	72.56	8.28	1.875321	-1.19721	warm	dry
1932	70.857	9.51	1.004554	-0.8238	warm	normal

					very	
1933	72.627	7.19	1.909579	-1.52811	warm	very dry
1934	71.287	10.07	1.224419	-0.6538	warm	normal
1935	69.527	13.72	0.324508	0.454273	normal	normal
					very	
1936	72.737	7.87	1.965823	-1.32168	warm	dry
1937	71.773	9.25	1.472917	-0.90274	warm	normal
1938	70.07	15.05	0.602151	0.858036	normal	normal
1939	70.313	11.36	0.7264	-0.26218	normal	normal
1940	69.507	14.4	0.314281	0.660708	normal	normal
1941	70.25	7.73	0.694187	-1.36418	normal	dry
1942	67.89	15.32	-0.51251	0.940003	normal	normal
1943	70.3	14.47	0.719753	0.681959	normal	normal
1944	68.477	12.62	-0.21237	0.120333	normal	normal
1945	66.453	13.62	-1.24727	0.423915	cool	normal
1946	68.163	9.23	-0.37292	-0.90881	normal	normal
1947	70.02	12.65	0.576585	0.129441	normal	normal
1948	70.523	9.14	0.833776	-0.93613	normal	normal
					ext.	
1949	73.13	9.37	2.16677	-0.86631	warm	normal
1950	67.407	13.04	-0.75948	0.247837	normal	normal
1951	66.833	16.67	-1.05297	1.349838	cool	wet
1952	69.667	14.2	0.396092	0.599992	normal	normal
1953	70.483	16.03	0.813323	1.155546	normal	wet
1954	70.49	13.91	0.816902	0.511953	normal	normal
					very	
1955	72.14	10.11	1.660569	-0.64166	warm	normal
1956	69.7	14.12	0.412965	0.575705	normal	normal
					very	
1957	69.81	18.16	0.469209	1.802174	normal	wet
1958	66.417	9.71	-1.26568	-0.76309	cool	normal
1959	70.537	16.88	0.840934	1.41359	normal	wet
1960	67.947	11.19	-0.48337	-0.31379	normal	normal
1961	68.803	9.76	-0.04568	-0.74791	normal	normal
1962	66.653	14.91	-1.14501	0.815535	cool	normal
1963	68.827	9.61	-0.03341	-0.79345	normal	normal
1964	69.42	6.99	0.269797	-1.58883	normal	very dry
1965	67	11.62	-0.96758	-0.18325	normal	normal
1966	68.713	10.52	-0.0917	-0.51719	normal	normal
1967	66.48	12.39	-1.23346	0.05051	cool	normal
1968	67.977	15.01	-0.46803	0.845893	normal	normal
1969	66.793	12.5	-1.07342	0.083904	cool	normal
1970	69.62	9.42	0.37206	-0.85113	normal	normal
1971	67.957	9.58	-0.47825	-0.80255	normal	normal
1972	66.873	13.4	-1.03252	0.357127	cool	normal
1973	69.467	12.66	0.293829	0.132477	normal	normal
1974	67.853	11.29	-0.53143	-0.28343	normal	normal
1975	69.553	12.92	0.337802	0.211408	normal	normal
1976	69.893	7.19	0.511648	-1.52811	normal	very dry
1977	68.483	12.07	-0.2093	-0.04664	normal	normal
1978	68.24	16.98	-0.33355	1.443948	normal	wet
1979	68.167	15.39	-0.37088	0.961254	normal	normal
1980	69.923	14.27	0.526988	0.621243	normal	normal
1981	68.477	18.18	-0.21237	1.808245	normal	very



						wet
1982	67.41	8.99	-0.75794	-0.98167	normal	normal
1983	71.71	11.98	1.440705	-0.07396	warm	normal
1984	69.417	11.16	0.268263	-0.3229	normal	normal
1985	66.8	8.2	-1.06984	-1.2215	cool	dry
1986	68.047	15.13	-0.43224	0.882322	normal	normal
1987	70.213	15.07	0.675269	0.864108	normal	normal
					ext.	
1988	73.35	7.57	2.279259	-1.41275	warm	dry
1989	69.397	10.12	0.258037	-0.63862	normal	normal
1990	68.967	20.69	0.038172	2.570234	normal	ext. wet
1991	70.673	12.25	0.910473	0.008008	normal	normal
					ext.	
1992	64.42	9.34	-2.28677	-0.87541	cool	normal
1993	67.447	20.78	-0.73902	2.597557	normal	ext. wet
1994	67.51	14.25	-0.70681	0.615171	normal	normal
1995	71.757	10.17	1.464736	-0.62344	warm	normal
1996	67.293	10.46	-0.81777	-0.5354	normal	normal
1997	68.42	16.78	-0.24152	1.383232	normal	wet
						very
1998	68.697	18.32	-0.09988	1.850747	normal	wet
1999	69.833	16.95	0.48097	1.43484	normal	wet
						very
2000	68.48	18.16	-0.21084	1.802174	normal	wet
2001	70.147	11.29	0.641522	-0.28343	normal	normal
						very
2002	70.637	17.85	0.892065	1.708064	normal	wet
2003	69.51	8	0.315815	-1.28221	normal	dry
					very	
2004	65.717	15.42	-1.6236	0.970361	cool	Normal
2005	70.903	12.54	1.028075	0.096047	warm	Normal
2006	70.573	11.79	0.859341	-0.13164	normal	Normal

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**Nov-Mar northwest MN**

YEAR	NW_T	NW_P	NW_Tz	NW_Pz	T_class	P_class
1892	13.75	4.16	-0.04305	0.444066	normal ext.	normal
1893	5.946	5.24	-2.15896	1.474385	cool	wet
1894	11.554	3.84	-0.63845	0.138786	normal	normal
1895	11.994	1.78	-0.51915	-1.82645	normal	very dry
1896	12.392	4.23	-0.41124	0.510846	normal	normal
1897	8.614	6.55	-1.43558	2.724123	cool	ext. wet
1898	13.794	2.49	-0.03112	-1.14911	normal very	dry
1899	7.808	2.68	-1.65411	-0.96785	cool	normal
1900	15.024	2.65	0.302376	-0.99647	normal	normal
1901	13.184	2.99	-0.19651	-0.67211	normal	normal
1902	17.536	3.36	0.983458	-0.31913	normal	normal
1903	14.352	3.18	0.120175	-0.49085	normal	normal
1904	8.378	5.09	-1.49957	1.331285	cool	wet
1905	15.78	2.98	0.507351	-0.68165	normal	normal
1906	15.162	3.69	0.339792	-0.00431	normal	normal very
1907	10.866	5.75	-0.82499	1.960924	normal	wet
1908	17.16	3.29	0.881513	-0.38591	normal	normal
1909	14.336	2.84	0.115837	-0.81521	normal	normal
1910	15.854	3.87	0.527415	0.167406	normal	normal
1911	11.73	3.1	-0.59073	-0.56717	normal very	normal
1912	7.76	2.58	-1.66713	-1.06325	cool	dry
1913	11.76	2.5	-0.5826	-1.13957	normal	dry
1914	16.158	2.25	0.609839	-1.37807	normal	dry
1915	14.526	2.41	0.167352	-1.22543	normal	dry very
1916	9.844	5.61	-1.10209	1.827364	cool very	wet
1917	7.532	3.07	-1.72894	-0.59579	cool	normal
1918	13.194	1.88	-0.1938	-1.73105	normal	very dry
1919	16.674	3.69	0.749743	-0.00431	normal very	normal
1920	8.314	4.43	-1.51692	0.701645	cool	normal
1921	17.282	3.87	0.914591	0.167406	normal	normal
1922	13.242	3.9	-0.18078	0.196026	normal	normal very
1923	11.312	5.61	-0.70407	1.827364	normal	wet
1924	17.946	1.9	1.094622	-1.71197	warm	very dry
1925	12.202	2.74	-0.46276	-0.91061	normal	normal
1926	16.524	2.65	0.709073	-0.99647	normal	normal
1927	13.432	3.95	-0.12927	0.243726	normal	normal
1928	12.612	3.53	-0.35159	-0.15695	normal	normal
1929	13.516	3.27	-0.10649	-0.40499	normal	normal
1930	12.884	3.91	-0.27785	0.205566	normal very	normal
1931	20.81	4.41	1.871144	0.682565	warm	normal
1932	16.35	3.62	0.661896	-0.07109	normal	normal
1933	12.374	4.27	-0.41612	0.549006	normal	normal
1934	12.24	3.63	-0.45246	-0.06155	normal	normal

1935	16.136	3.37	0.603874	-0.30959	normal ext.	normal
1936	4.588	4.42	-2.52716	0.692105	cool	normal
1937	9.474	3.43	-1.20241	-0.25235	cool	normal
1938	14.9	3.16	0.268755	-0.50993	normal	normal
1939	10.944	3.83	-0.80384	0.129246	normal	normal
1940	17.3	2.52	0.919471	-1.12049	normal	dry
1941	14.382	4.13	0.128309	0.415446	normal very	normal
1942	20.04	3.18	1.662372	-0.49085	warm	normal
1943	9.662	3.95	-1.15143	0.243726	cool	normal
1944	17.064	2.54	0.855484	-1.10141	normal	dry
1945	18.578	4.91	1.265978	1.159565	warm	wet
1946	14.732	3.55	0.223205	-0.13787	normal	normal
1947	13.514	2.85	-0.10703	-0.80567	normal	normal
1948	10.282	4.71	-0.98333	0.968765	normal	normal
1949	12.118	4.45	-0.48553	0.720725	normal	normal very
1950	10.616	5.36	-0.89277	1.588864	normal	wet
1951	10.734	4.24	-0.86078	0.520386	normal	normal
1952	12.524	3.79	-0.37545	0.091086	normal	normal
1953	18.8	3.86	1.326169	0.157866	warm	normal
1954	17.014	3.57	0.841928	-0.11879	normal	normal
1955	14.216	3.1	0.083301	-0.56717	normal	normal
1956	8.76	4.28	-1.39599	0.558546	cool	normal
1957	14.314	3.56	0.109872	-0.12833	normal very	normal
1958	19.658	1.5	1.5588	-2.09357	warm	ext. dry
1959	11.818	3.77	-0.56687	0.072006	normal	normal
1960	13.81	2.38	-0.02678	-1.25405	normal	dry
1961	17.27	2.56	0.911337	-1.08233	normal	dry
1962	11.996	4.17	-0.51861	0.453606	normal	normal
1963	15.612	1.99	0.461801	-1.62611	normal	very dry
1964	15.046	2.73	0.30834	-0.92015	normal	normal
1965	8.776	3.35	-1.39166	-0.32867	cool	normal
1966	12.4	5.86	-0.40907	2.065864	normal	ext. wet
1967	11.392	3.91	-0.68237	0.205566	normal	normal
1968	15.248	3.72	0.363109	0.024306	normal	normal
1969	12.14	4.04	-0.47957	0.329586	normal	normal
1970	12.15	3.4	-0.47686	-0.28097	normal	normal
1971	11.336	3.61	-0.69756	-0.08063	normal	normal
1972	10.746	3.33	-0.85753	-0.34775	normal	normal
1973	16.764	2.68	0.774145	-0.96785	normal	normal
1974	11.314	3.68	-0.70352	-0.01385	normal	normal
1975	15.434	4.68	0.41354	0.940145	normal	normal
1976	16.346	3.7	0.660812	0.005226	normal	normal
1977	12.582	3.27	-0.35973	-0.40499	normal	normal
1978	9.346	4.82	-1.23711	1.073705	cool ext.	wet
1979	6.53	5.07	-2.00062	1.312205	cool	wet
1980	14.324	3.21	0.112583	-0.46223	normal very	normal
1981	19.686	2.67	1.566392	-0.97739	warm	normal
1982	12.938	3.83	-0.26321	0.129246	normal	normal

					very	
1983	20.078	4	1.672675	0.291426	warm	normal
1984	15.218	3.61	0.354975	-0.08063	normal	normal
1985	14.43	2.66	0.141323	-0.98693	normal	normal
1986	12.348	3.08	-0.42317	-0.58625	normal	normal
					very	
1987	20.474	4.55	1.780044	0.816125	warm	normal
1988	16.352	3.55	0.662438	-0.13787	normal	normal
						very
1989	12.04	5.52	-0.50668	1.741504	normal	wet
1990	15.914	3.61	0.543683	-0.08063	normal	normal
1991	16.536	2.75	0.712327	-0.90107	normal	normal
1992	19.124	3.68	1.414016	-0.01385	warm	normal
1993	13.32	3.56	-0.15963	-0.12833	normal	normal
1994	11.518	3.52	-0.64821	-0.16649	normal	normal
1995	18.194	5.03	1.161863	1.274045	warm	wet
					very	very
1996	8.296	5.52	-1.5218	1.741504	cool	wet
1997	9.37	6.57	-1.2306	2.743203	cool	ext. wet
					ext.	
1998	21.69	3.88	2.10974	0.176946	warm	normal
1999	19.164	5.11	1.424861	1.350365	warm	wet
					ext.	
2000	23.848	2.75	2.694842	-0.90107	warm	normal
						very
2001	13.036	5.58	-0.23663	1.798744	normal	wet
					ext.	
2002	21.494	2.2	2.056598	-1.42577	warm	dry
2003	15.25	2.14	0.363651	-1.48301	normal	dry
2004	15.658	4.52	0.474273	0.787505	normal	normal
2005	16.852	3.2	0.798004	-0.47177	normal	normal
					very	
2006	20.248	6.15	1.718768	2.342524	warm	ext. wet

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**Nov-Mar north-central MN**

YEAR	NC_T	NC_P	NC_Tz	NC_Pz	T_class	P_class
1892	14.254	5.11	-0.00206	0.528525	normal very	normal
1893	7.842	5.69	-1.91155	0.969237	cool	normal
1894	11.712	5.18	-0.75906	0.581714	normal	normal
1895	11.756	2.78	-0.74596	-1.24192	normal	dry
1896	12.62	4.79	-0.48866	0.285373	normal	normal
1897	9.932	9.14	-1.28915	3.590716	cool	ext. wet
1898	12.728	3.02	-0.4565	-1.05956	normal ext.	dry
1899	7.232	3.3	-2.09321	-0.8468	cool	normal
1900	14.958	2.63	0.207595	-1.3559	normal	dry
1901	13.074	4.73	-0.35346	0.239782	normal	normal
1902	17.078	3.17	0.838932	-0.94558	normal	normal
1903	14.452	4.96	0.056908	0.414547	normal very	normal
1904	7.584	5.8	-1.98838	1.05282	cool	wet
1905	15.062	3.55	0.238566	-0.65684	normal	normal
1906	15.754	4.43	0.444644	0.011827	normal	normal
1907	12.022	7.43	-0.66675	2.291374	normal	ext. wet
1908	17.408	3.73	0.937206	-0.52007	normal	normal
1909	14.446	3.75	0.055122	-0.50487	normal	normal
1910	17.012	4.36	0.819277	-0.04136	normal	normal
1911	13.264	4.24	-0.29688	-0.13254	normal very	normal
1912	8.028	2.73	-1.85616	-1.27992	cool	dry
1913	12.554	3.29	-0.50832	-0.8544	normal	normal
1914	16.812	3.02	0.759717	-1.05956	normal	dry
1915	15.818	2.54	0.463703	-1.42429	normal	dry
1916	11.862	6.13	-0.71439	1.303571	normal very	wet
1917	9.156	2.75	-1.52024	-1.26472	cool	dry
1918	13.372	1.84	-0.26472	-1.95618	normal	very dry
1919	18.188	4.66	1.16949	0.186593	warm	normal
1920	9.586	4.77	-1.39219	0.270176	cool	normal
1921	17.794	3.99	1.052156	-0.32251	warm	normal
1922	12.6	4.19	-0.49462	-0.17054	normal	normal
1923	11.068	6.09	-0.95085	1.273177	normal	wet
1924	17.114	2.2	0.849652	-1.68264	normal	very dry
1925	12.246	2.61	-0.60004	-1.3711	normal	dry
1926	15.23	3.56	0.288597	-0.64924	normal	normal
1927	13.128	4.7	-0.33738	0.216986	normal	normal
1928	11.714	3.58	-0.75847	-0.63404	normal	normal
1929	13.64	2.95	-0.18491	-1.11275	normal	dry
1930	12.552	4.03	-0.50891	-0.29211	normal very	normal
1931	20.882	3.98	1.971763	-0.3301	warm	normal
1932	17.798	5.57	1.053348	0.878055	warm	normal
1933	12.246	6.33	-0.60004	1.45554	normal	wet
1934	11.904	4.62	-0.70189	0.156199	normal	normal
1935	15.602	4.99	0.399378	0.437343	normal ext.	normal
1936	7.212	4.49	-2.09916	0.057418	cool	normal

1937	10.066	5.58	-1.24924	0.885654	cool	normal
1938	16.08	3.53	0.541727	-0.67204	normal	normal very
1939	11.612	6.48	-0.78884	1.569518	normal	wet
1940	17.508	3.1	0.966986	-0.99877	normal	normal
1941	14.912	4.67	0.193896	0.194191	normal	normal very
1942	19.672	3	1.611425	-1.07476	warm	dry
1943	9.94	4.02	-1.28677	-0.29971	cool	normal
1944	16.878	2.55	0.779372	-1.41669	normal	dry
1945	18.542	5.63	1.274911	0.923646	warm	normal
1946	15.182	4.64	0.274302	0.171396	normal	normal
1947	13.78	3.64	-0.14321	-0.58845	normal	normal
1948	11.24	4.67	-0.89963	0.194191	normal	normal
1949	13.11	5.01	-0.34274	0.45254	normal	normal
1950	11.318	5.54	-0.8764	0.85526	normal	normal
1951	11.016	5.64	-0.96633	0.931245	normal	normal
1952	13.508	4.69	-0.22422	0.209388	normal	normal
1953	18.226	3.88	1.180806	-0.40609	warm	normal
1954	16.984	5.59	0.810938	0.893252	normal	normal
1955	14.586	4.12	0.096814	-0.22373	normal	normal
1956	10.582	4.66	-1.09558	0.186593	cool	normal
1957	13.44	4.53	-0.24447	0.087812	normal	normal
1958	18.718	2.48	1.327324	-1.46988	warm	dry
1959	11.744	3.96	-0.74953	-0.3453	normal	normal
1960	13.594	2.44	-0.1986	-1.50027	normal	very dry
1961	17.49	3.13	0.961625	-0.97598	normal	normal
1962	12.904	4.11	-0.40409	-0.23132	normal	normal
1963	14.614	2.62	0.105152	-1.3635	normal	dry
1964	15.228	3.5	0.288001	-0.69483	normal	normal
1965	9.254	4.29	-1.49106	-0.09455	cool	normal
1966	13.524	8	-0.21945	2.724488	normal	ext. wet
1967	12.06	4.45	-0.65543	0.027024	normal	normal
1968	15.6	4.06	0.398783	-0.26932	normal	normal
1969	13.704	5.3	-0.16585	0.672896	normal	normal
1970	13.3	4.15	-0.28616	-0.20093	normal	normal
1971	11.554	5.06	-0.80612	0.490532	normal	normal
1972	10.924	4.41	-0.99373	-0.00337	normal	normal
1973	17.192	3.08	0.872881	-1.01397	normal	dry
1974	13.126	3.91	-0.33797	-0.38329	normal	normal very
1975	16.27	6.98	0.598309	1.949442	normal	wet
1976	16.116	4.73	0.552448	0.239782	normal	normal
1977	12.954	3.99	-0.3892	-0.32251	normal	normal
1978	11.064	5.75	-0.95204	1.014828	normal	wet very
1979	8.584	6.03	-1.69058	1.227586	cool	wet
1980	14.474	4.06	0.06346	-0.26932	normal	normal
1981	18.444	3.57	1.245727	-0.64164	warm	normal
1982	13.346	4.37	-0.27246	-0.03376	normal	normal very
1983	20.162	4.45	1.757347	0.027024	warm	normal
1984	14.756	4.97	0.14744	0.422146	normal	normal
1985	14.906	3.55	0.19211	-0.65684	normal	normal

1986	13.316	3.9	-0.28139	-0.39089	normal ext.	normal
1987	21.254	4	2.082545	-0.31491	warm	normal
1988	15.928	4.29	0.496461	-0.09455	normal	normal very
1989	13.106	6.56	-0.34393	1.630306	normal	wet
1990	15.776	4.11	0.451196	-0.23132	normal	normal
1991	16.514	3.67	0.670972	-0.56566	normal	normal
1992	18.504	5.02	1.263595	0.460138	warm	normal
1993	14.944	4.18	0.203426	-0.17814	normal	normal
1994	12.108	4.28	-0.64114	-0.10215	normal	normal
1995	18.596	5.03	1.290992	0.467737	warm very	normal
1996	8.404	6.38	-1.74419	1.493533	cool	wet
1997	11.526	7.32	-0.81445	2.207791	normal ext.	ext. wet
1998	22.212	3.91	2.367838	-0.38329	warm	normal
1999	18.872	5.63	1.373185	0.923646	warm ext.	normal
2000	22.7	2.77	2.513164	-1.24952	warm	dry
2001	13.816	6.2	-0.13249	1.35676	normal ext.	wet
2002	21.366	3.66	2.115899	-0.57326	warm	normal
2003	15.258	1.99	0.296935	-1.8422	normal	very dry
2004	16.418	4.97	0.642383	0.422146	normal	normal
2005	16.892	4.48	0.783541	0.04982	normal very	normal
2006	20.41	7.34	1.831202	2.222988	warm	ext. wet

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## Nov-Mar northeast MN

YEAR	NE_T	NW_P	NE_Tz	NE_Pz	T_class	P_class
1892	17.744	6.65	0.655186	0.485151	normal	normal
1893	11.838	7.04	-1.40658	0.72051	cool	normal
1894	14.604	6.9	-0.44098	0.636022	normal	normal
1895	14.742	4.83	-0.3928	-0.61319	normal	normal
1896	15.778	6.32	-0.03114	0.286	normal	normal
1897	13.93	10.83	-0.67627	3.007724	normal	ext. wet
1898	15.318	4.06	-0.19172	-1.07788	normal ext.	dry
1899	9.966	5.01	-2.06009	-0.50457	cool	normal
1900	16.514	3.59	0.225796	-1.36152	normal	dry
1901	13.496	4.52	-0.82778	-0.80028	normal	normal
1902	17.55	3.77	0.587461	-1.25289	normal	dry
1903	15.978	7.55	0.03868	1.028288	normal ext.	wet
1904	8.73	5.73	-2.49158	-0.07006	cool	normal
1905	15.822	5.07	-0.01578	-0.46836	normal	normal
1906	17.554	4.76	0.588857	-0.65544	normal	normal very
1907	14.924	8.89	-0.32927	1.83696	normal	wet
1908	18.704	4.09	0.990319	-1.05977	normal	dry
1909	16.234	5.6	0.128049	-0.14851	normal	normal
1910	19.658	6.97	1.323358	0.678266	warm	normal
1911	16.318	6.36	0.157373	0.31014	normal very	normal
1912	11.022	5.24	-1.69145	-0.36577	cool	normal
1913	14.794	4.6	-0.37465	-0.752	normal	normal
1914	19.192	4.09	1.160678	-1.05977	warm	dry
1915	17.936	3.4	0.722212	-1.47618	normal	dry
1916	14.814	10.32	-0.36767	2.699946	normal	ext. wet
1917	12.542	5.08	-1.16082	-0.46232	cool	normal
1918	15.334	2.93	-0.18614	-1.75982	normal ext.	very dry
1919	21.606	6.09	2.003399	0.147198	warm	normal
1920	12.91	5.77	-1.03235	-0.04592	cool very	normal
1921	20.688	5.21	1.682928	-0.38387	warm	normal
1922	15.394	5.33	-0.16519	-0.31145	normal	normal
1923	13.136	7.27	-0.95345	0.859312	normal	normal
1924	18.16	3.93	0.80041	-1.15633	normal	dry
1925	13.598	3.92	-0.79217	-1.16237	normal	dry
1926	15.934	4.91	0.02332	-0.56492	normal	normal
1927	14.938	9.71	-0.32438	2.331819	normal	ext. wet
1928	15.05	4.69	-0.28528	-0.69768	normal	normal
1929	15.166	4.71	-0.24479	-0.68561	normal	normal
1930	14.014	4.39	-0.64695	-0.87873	normal ext.	normal
1931	22.244	4.38	2.226123	-0.88476	warm	normal
1932	20.104	6.42	1.479055	0.346349	warm	normal
1933	14.884	5.87	-0.34323	0.014431	normal	normal
1934	13.092	5.41	-0.96881	-0.26317	normal	normal
1935	17.04	7.8	0.409421	1.17916	normal	wet
1936	11.248	5.89	-1.61255	0.026501	very	normal



					cool	
1937	13.338	7.65	-0.88294	1.088637	normal	wet
1938	17.978	6.44	0.736874	0.358418	normal	normal
1939	14.468	9.22	-0.48846	2.036111	normal	ext. wet
1940	19.726	3.03	1.347096	-1.69947	warm	very dry
1941	17.136	6.39	0.442935	0.328244	normal	normal
					very	
1942	20.68	4.55	1.680135	-0.78217	warm	normal
1943	12.64	4.84	-1.12661	-0.60716	cool	normal
1944	18.076	3.6	0.771086	-1.35548	normal	dry
1945	19.358	7.55	1.218629	1.028288	warm	wet
1946	16.448	6.1	0.202756	0.153233	normal	normal
1947	15.636	4.69	-0.08071	-0.69768	normal	normal
1948	14.4	6.92	-0.5122	0.648092	normal	normal
1949	17.018	7.56	0.401741	1.034323	normal	wet
1950	14.374	6.73	-0.52127	0.53343	normal	normal
1951	13.446	6.92	-0.84523	0.648092	normal	normal
1952	15.736	4.96	-0.0458	-0.53474	normal	normal
1953	19.924	5.07	1.416218	-0.46836	warm	normal
1954	19.044	6.59	1.109012	0.448941	warm	normal
1955	16.984	5.22	0.389872	-0.37784	normal	normal
1956	15	5.71	-0.30274	-0.08213	normal	normal
1957	15.218	5.32	-0.22663	-0.31749	normal	normal
1958	18.598	4.18	0.953315	-1.00546	normal	dry
1959	12.56	4.55	-1.15453	-0.78217	cool	normal
1960	15.278	3.36	-0.20569	-1.50032	normal	very dry
1961	18.14	4.73	0.793428	-0.67354	normal	normal
1962	14.456	4.84	-0.49265	-0.60716	normal	normal
1963	14.278	3.69	-0.55479	-1.30117	normal	dry
1964	16.786	4.73	0.320751	-0.67354	normal	normal
					very	
1965	10.848	6.88	-1.75219	0.623953	cool	normal
1966	15.704	9.56	-0.05697	2.241296	normal	ext. wet
1967	12.926	5.58	-1.02676	-0.16058	cool	normal
1968	16.616	4.92	0.261404	-0.55888	normal	normal
1969	15.758	7.06	-0.03812	0.73258	normal	normal
1970	14.522	5.55	-0.46961	-0.17868	normal	normal
1971	13.66	7.5	-0.77053	0.998114	normal	normal
1972	11.748	7.18	-1.438	0.804998	cool	normal
1973	17.486	4.47	0.565119	-0.83045	normal	normal
1974	14.2	4.88	-0.58201	-0.58302	normal	normal
1975	17.312	7.97	0.504376	1.281753	normal	wet
1976	16.874	7.93	0.351471	1.257613	normal	wet
1977	13.028	4.46	-0.99116	-0.83648	normal	normal
1978	13.45	6.12	-0.84384	0.165303	normal	normal
					very	
1979	10.452	8.27	-1.89043	1.462799	cool	wet
1980	16.38	4.15	0.179017	-1.02357	normal	dry
1981	18.662	4.75	0.975657	-0.66147	normal	normal
1982	14.348	5.95	-0.53035	0.06271	normal	normal
1983	19.93	6.76	1.418312	0.551534	warm	normal
1984	14.716	6.01	-0.40188	0.098919	normal	normal
1985	15.742	5.13	-0.04371	-0.43215	normal	normal

1986	13.718	5.25	-0.75028	-0.35973	normal very	normal
1987	21.166	4.1	1.849796	-1.05374	warm	dry
1988	15.84	5.27	-0.0095	-0.34766	normal	normal
1989	13.764	7.44	-0.73422	0.961905	normal	normal
1990	15.03	4.18	-0.29226	-1.00546	normal	dry
1991	16.376	5.88	0.177621	0.020466	normal	normal
1992	18.052	7.69	0.762708	1.112777	normal	wet
1993	16.058	5.16	0.066608	-0.41404	normal	normal
1994	12.482	5.72	-1.18176	-0.07609	cool	normal
1995	19.108	5.93	1.131354	0.05064	warm ext.	normal
1996	9.466	9.17	-2.23464	2.005937	cool	ext. wet
1997	13.042	10.03	-0.98627	2.524935	normal ext.	ext. wet
1998	22.862	6.14	2.441865	0.177373	warm	normal
1999	19.28	7.69	1.191399	1.112777	warm ext.	wet
2000	21.998	4.38	2.140245	-0.88476	warm	normal
2001	14.574	7.34	-0.45145	0.901556	normal very	normal
2002	21.432	5.51	1.942656	-0.20282	warm	normal
2003	14.968	2.82	-0.31391	-1.8262	normal	very dry
2004	17.1	6.44	0.430367	0.358418	normal	normal
2005	16.636	6.17	0.268386	0.195477	normal very	normal
2006	20.448	7.87	1.599145	1.221404	warm	wet

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### Nov-Mar west-central MN

YEAR	WC_T	WC_P	WC_Tz	WC_Pz	T_class	P_class
1892	18.158	4.4	-0.19171	0.119223	normal ext.	normal
1893	11.064	4.95	-2.23417	0.541681	cool	normal
1894	15.27	3.73	-1.02321	-0.39541	cool	normal
1895	15.468	1.52	-0.9662	-2.09292	normal	ext. dry
1896	17.422	4.88	-0.40362	0.487914	normal very	normal
1897	13.4	7.33	-1.5616	2.36977	cool	ext. wet
1898	20.188	2.57	0.392748	-1.28641	normal very	dry
1899	12.948	2.63	-1.69174	-1.24032	cool	dry
1900	19.89	3.78	0.30695	-0.357	normal	normal
1901	18.074	3.33	-0.2159	-0.70265	normal	normal
1902	20.854	3.36	0.584498	-0.67961	normal	normal
1903	17.562	4.98	-0.36331	0.564724	normal very	normal
1904	13.536	3	-1.52245	-0.95612	cool	normal
1905	19.602	2.33	0.224031	-1.47075	normal	dry
1906	20.272	4.55	0.416933	0.234439	normal	normal
1907	17.216	4.63	-0.46293	0.295887	normal	normal
1908	22.304	3.87	1.001971	-0.28787	warm	normal
1909	19.56	4.87	0.211939	0.480232	normal	normal
1910	20.226	4.51	0.403689	0.203715	normal	normal
1911	18.088	2.48	-0.21187	-1.35554	normal very	dry
1912	12.946	3.04	-1.69232	-0.9254	cool	normal
1913	18.754	2.28	-0.02012	-1.50916	normal	very dry
1914	21.852	3.05	0.871835	-0.91772	normal	normal
1915	19.104	3.59	0.080651	-0.50294	normal	normal
1916	16.054	6.14	-0.79748	1.455726	normal very	wet
1917	13.328	5.18	-1.58233	0.718345	cool	normal
1918	18.202	2.65	-0.17905	-1.22496	normal	dry
1919	22.58	5.87	1.081435	1.248337	warm	wet
1920	15.194	5.67	-1.04509	1.094716	cool	wet
1921	23.24	4.1	1.271458	-0.11121	warm	normal
1922	16.654	5.39	-0.62474	0.879647	normal	normal
1923	17.26	6.96	-0.45026	2.085571	normal	ext. wet
1924	22.37	2.65	1.020973	-1.22496	warm	dry
1925	18.168	1.91	-0.18884	-1.79336	normal	very dry
1926	20.198	3.57	0.395627	-0.5183	normal	normal
1927	19.156	4.41	0.095622	0.126904	normal	normal
1928	17.688	4.32	-0.32703	0.057775	normal	normal
1929	17.982	3.73	-0.24239	-0.39541	normal	normal
1930	18.694	2.82	-0.03739	-1.09438	normal ext.	dry
1931	26.328	4.68	2.160532	0.334293	warm	normal
1932	21.148	4.09	0.669144	-0.11889	normal	normal
1933	18.982	3.5	0.045525	-0.57207	normal	normal
1934	19.622	2.11	0.229789	-1.63974	normal	very dry
1935	21.952	3.58	0.900626	-0.51062	normal	normal
1936	10.236	4.07	-2.47256	-0.13425	ext.	normal

					cool	
1937	14.644	5.77	-1.20344	1.171527	cool	wet
1938	19.576	3.22	0.216545	-0.78714	normal	normal
1939	18.522	4.46	-0.08691	0.16531	normal	normal
1940	20.842	3.9	0.581043	-0.26483	normal	normal
1941	19.124	4.08	0.086409	-0.12657	normal	normal
					very	
1942	24.884	3.04	1.744786	-0.9254	warm	normal
1943	15.048	4.56	-1.08712	0.24212	cool	normal
1944	22.058	3.78	0.931145	-0.357	normal	normal
1945	22.664	4.68	1.10562	0.334293	warm	normal
1946	19.214	5.54	0.112321	0.994863	normal	normal
1947	19.924	3.17	0.316739	-0.82555	normal	normal
1948	14.67	5.49	-1.19595	0.956457	cool	normal
1949	17.514	4.12	-0.37713	-0.09585	normal	normal
1950	16.826	5.13	-0.57521	0.67994	normal	normal
1951	13.858	5.6	-1.42974	1.040949	cool	wet
1952	15.632	6.9	-0.91898	2.039485	normal	ext. wet
1953	21.96	4.68	0.902929	0.334293	normal	normal
1954	21.214	5.39	0.688146	0.879647	normal	normal
1955	19.836	2.23	0.291403	-1.54756	normal	very dry
					very	
1956	13.402	3.83	-1.56103	-0.3186	cool	normal
1957	19.786	4.35	0.277007	0.080818	normal	normal
1958	22.582	2.68	1.082011	-1.20192	warm	dry
1959	18.674	3.16	-0.04315	-0.83323	normal	normal
1960	17.746	3.24	-0.31033	-0.77178	normal	normal
1961	22.712	2.59	1.11944	-1.27105	warm	dry
1962	16.338	4.59	-0.71572	0.265163	normal	normal
1963	20.436	2.8	0.46415	-1.10974	normal	dry
1964	20.448	3.13	0.467605	-0.85627	normal	normal
					very	
1965	13.476	4.32	-1.53972	0.057775	cool	normal
1966	18.842	5.16	0.005217	0.702983	normal	normal
1967	17.234	4.23	-0.45775	-0.01135	normal	normal
1968	21.054	2.64	0.64208	-1.23264	normal	dry
					very	
1969	15.524	6.7	-0.95008	1.885864	normal	wet
1970	16.612	3.74	-0.63683	-0.38773	normal	normal
1971	16.764	5.86	-0.59307	1.240656	normal	wet
1972	15.488	5.3	-0.96044	0.810518	normal	normal
1973	20.882	4.76	0.592559	0.395741	normal	normal
1974	17.528	3.6	-0.3731	-0.49526	normal	normal
					very	
1975	19.146	6.6	0.092743	1.809054	normal	wet
1976	21.576	4.77	0.792371	0.403422	normal	normal
					very	
1977	16.622	6.29	-0.63395	1.570941	normal	wet
1978	14.08	6.16	-1.36582	1.471088	cool	wet
					very	very
1979	11.994	6.6	-1.96641	1.809054	cool	wet
1980	19.586	3.43	0.219425	-0.62584	normal	normal
					very	
1981	24.316	2.56	1.581252	-1.29409	warm	dry

1982	16.226	5.07	-0.74796	0.633853	normal	normal
1983	23.566	4.69	1.365317	0.341974	warm	normal
1984	17.884	5.87	-0.2706	1.248337	normal	wet
1985	19.472	3.67	0.186602	-0.44149	normal	normal
1986	16.304	4.83	-0.7255	0.449508	normal	normal
					ext.	
1987	26.096	3.67	2.093736	-0.44149	warm	normal
1988	20.692	3.7	0.537856	-0.41845	normal	normal
1989	17.578	5.62	-0.3587	1.056311	normal	wet
1990	21.708	3.6	0.830375	-0.49526	normal	normal
1991	22.058	3.45	0.931145	-0.61048	normal	normal
1992	23.946	3.77	1.474724	-0.36468	warm	normal
1993	17.092	4.94	-0.49863	0.534	normal	normal
1994	15.508	5.43	-0.95468	0.910371	normal	normal
1995	22.606	5.5	1.088921	0.964138	warm	normal
1996	15.208	4.13	-1.04106	-0.08817	cool	normal
1997	14.796	7.38	-1.15968	2.408175	cool	ext. wet
					very	
1998	24.266	4.19	1.566856	-0.04208	warm	normal
					very	
1999	24.76	4.42	1.709085	0.134585	warm	normal
					ext.	
2000	27.48	3.23	2.492207	-0.77946	warm	normal
2001	15.148	7.07	-1.05833	2.170063	cool	ext. wet
					very	
2002	25.636	4.11	1.961296	-0.10353	warm	normal
2003	20.44	1.76	0.465302	-1.90857	normal	very dry
2004	21.098	3.62	0.654749	-0.4799	normal	normal
2005	22.41	2.84	1.03249	-1.07902	warm	Dry
2006	23.116	5.7	1.235756	1.117759	warm	Wet

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## Nov-Mar central MN

YEAR	C_T	C_P	C_Tz	C_Pz	T_class	P_class
1892	19.66	5.58	0.008831	0.457248	normal very	normal
1893	13.54	4.56	-1.88367	-0.19604	cool	normal
1894	17.628	4.56	-0.61953	-0.19604	normal	normal
1895	17.026	2.31	-0.80569	-1.63712	normal	very dry
1896	19.666	4.36	0.010686	-0.32414	normal	normal
1897	15.676	8.03	-1.22315	2.026426	cool	ext. wet
1898	20.68	2.83	0.324247	-1.30407	normal very	dry
1899	13.752	3.66	-1.81811	-0.77248	cool	normal
1900	20.776	3.68	0.353933	-0.75967	normal	normal
1901	18.596	3.17	-0.32019	-1.08631	normal	dry
1902	21.394	2.56	0.545038	-1.477	normal	dry
1903	19.178	6.31	-0.14022	0.924799	normal very	normal
1904	13.624	3.38	-1.85769	-0.95181	cool	normal
1905	19.946	2.26	0.097271	-1.66915	normal	very dry
1906	20.57	4.66	0.290231	-0.13199	normal	normal
1907	18.54	5.01	-0.33751	0.092174	normal	normal
1908	23.026	4.56	1.049704	-0.19604	warm	normal
1909	20.5	5.12	0.268585	0.162626	normal	normal
1910	21.26	5.38	0.503601	0.329151	normal	normal
1911	19.926	2.15	0.091086	-1.7396	normal very	very dry
1912	13.494	3.2	-1.89789	-1.0671	cool	dry
1913	19.808	2.11	0.054597	-1.76522	normal	very dry
1914	23.366	3.07	1.154843	-1.15036	warm	dry
1915	20.316	3.07	0.211686	-1.15036	normal	dry
1916	17.188	6.82	-0.75559	1.251444	normal very	wet
1917	14.56	5.44	-1.56825	0.36758	cool	normal
1918	19.14	2.3	-0.15197	-1.64353	normal	very dry
1919	23.826	8.09	1.297089	2.064855	warm	ext. wet
1920	15.904	6.13	-1.15264	0.809512	cool	normal
1921	24.17	4.26	1.403465	-0.38819	warm	normal
1922	17.18	6.07	-0.75806	0.771083	normal	normal
1923	18.358	6.1	-0.39379	0.790298	normal	normal
1924	23.14	2.96	1.084956	-1.22081	warm	dry
1925	19.282	2.69	-0.10806	-1.39374	normal	dry
1926	20.594	3.58	0.297653	-0.82371	normal	normal
1927	19.84	4.65	0.064492	-0.1384	normal	normal
1928	18.664	5.55	-0.29916	0.438033	normal	normal
1929	18.95	3.81	-0.21072	-0.6764	normal	normal
1930	19.754	3.5	0.037898	-0.87495	normal ext.	normal
1931	26.588	4.97	2.151187	0.066554	warm	normal
1932	22.642	6.23	0.930959	0.87356	normal	normal
1933	19.712	4.5	0.024911	-0.23447	normal	normal
1934	19.922	2.56	0.089849	-1.477	normal	dry
1935	21.946	4.81	0.715734	-0.03592	normal ext.	normal
1936	11.934	5.2	-2.38029	0.213865	cool	normal

1937	15.644	5.69	-1.23304	0.527701	cool	normal
1938	20.562	4.17	0.287757	-0.44583	normal	normal
1939	19.358	5.75	-0.08456	0.566129	normal	normal
1940	21.254	3.83	0.501746	-0.66359	normal	normal
1941	19.078	6.21	-0.17114	0.860751	normal	normal
					very	
1942	24.916	3.8	1.634152	-0.68281	warm	normal
1943	15.718	5.11	-1.21016	0.156222	cool	normal
1944	21.752	4.6	0.655743	-0.17042	normal	normal
1945	22.262	5.26	0.813451	0.252294	normal	normal
1946	20.214	6.26	0.180145	0.892775	normal	normal
1947	20.292	3.7	0.204265	-0.74686	normal	normal
1948	15.48	6.16	-1.28376	0.828727	cool	normal
1949	18.288	6.15	-0.41544	0.822322	normal	normal
1950	17.6	5.75	-0.62819	0.566129	normal	normal
					very	very
1951	14.526	7.3	-1.57876	1.558875	cool	wet
						very
1952	16.922	7.58	-0.83785	1.738209	normal	wet
1953	22.152	4.6	0.779436	-0.17042	normal	normal
1954	22.334	5.7	0.835716	0.534105	normal	normal
1955	20.108	3.03	0.147366	-1.17598	normal	dry
					very	
1956	14.53	4.34	-1.57753	-0.33695	cool	normal
1957	20.324	5	0.21416	0.085769	normal	normal
1958	22.636	2.61	0.929104	-1.44498	normal	dry
1959	19.4	2.47	-0.07157	-1.53465	normal	very dry
1960	18.064	3.51	-0.4847	-0.86855	normal	normal
1961	23.176	3.08	1.096089	-1.14395	warm	dry
1962	17.284	5.2	-0.7259	0.213865	normal	normal
1963	20.504	2.65	0.269822	-1.41936	normal	dry
1964	21.206	3.16	0.486903	-1.09272	normal	dry
					very	very
1965	14.436	7.33	-1.6066	1.578089	cool	wet
1966	19.848	6.84	0.066966	1.264254	normal	wet
1967	17.618	5.04	-0.62262	0.111388	normal	normal
1968	21.828	3.14	0.679245	-1.10553	normal	dry
1969	17.228	6.86	-0.74322	1.277063	normal	wet
1970	17.05	4.48	-0.79826	-0.24728	normal	normal
						very
1971	17.158	7.51	-0.76487	1.693376	normal	wet
1972	16.186	6.22	-1.06544	0.867155	cool	normal
1973	21.93	5.05	0.710786	0.117793	normal	normal
1974	18.918	4.66	-0.22062	-0.13199	normal	normal
						very
1975	19.482	7.57	-0.04621	1.731805	normal	wet
1976	21.752	7.17	0.655743	1.475612	normal	wet
1977	17.016	5.91	-0.80878	0.668606	normal	normal
1978	15.728	5.67	-1.20707	0.514891	cool	normal
					very	very
1979	13.444	7.75	-1.91335	1.847091	cool	wet
1980	20.076	3.81	0.137471	-0.6764	normal	normal
					very	
1981	24.776	3.11	1.590859	-1.12474	warm	dry

1982	17.208	5.34	-0.74941	0.303532	normal	normal very
1983	23.938	7.33	1.331723	1.578089	warm	wet
1984	18.086	6.74	-0.4779	1.200205	normal	wet
1985	20.256	4.95	0.193133	0.053745	normal	normal
1986	17.112	4.97	-0.77909	0.066554	normal	normal ext.
1987	26.476	2.78	2.116553	-1.3361	warm	Dry
1988	20.832	4.73	0.37125	-0.08716	normal	Normal
1989	18.516	6.02	-0.34493	0.739059	normal	Normal
1990	21.958	5.07	0.719445	0.130602	normal	Normal
1991	22.332	4.31	0.835097	-0.35616	normal	Normal
1992	23.17	5.67	1.094233	0.514891	warm	Normal
1993	18.666	5.07	-0.29855	0.130602	normal	Normal
1994	16.552	5.64	-0.95226	0.495677	normal	Normal
1995	22.938	5.09	1.022492	0.143412	warm	Normal
1996	15.578	4.77	-1.25345	-0.06154	cool	Normal
1997	16.228	8.59	-1.05245	2.385095	cool	ext. wet very
1998	25.064	5.46	1.679918	0.38039	warm	Normal
1999	24.718	5.22	1.572924	0.226675	warm	Normal
2000	27.602	3.94	2.464748	-0.59314	warm	Normal
2001	16.572	8.02	-0.94608	2.020021	normal	ext. wet ext.
2002	26.648	6.49	2.169741	1.040085	warm	Wet
2003	21.524	2.2	0.585238	-1.70758	normal	very dry
2004	22.36	4.53	0.843756	-0.21526	normal	Normal
2005	23.598	4.02	1.226585	-0.5419	warm	Normal
2006	24.384	6.06	1.469641	0.764678	warm	Normal

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### Nov-Mar east-central MN

YEAR	EC_T	EC_P	EC_Tz	EC_Pz	T_class	P_class
1892	19.25	6.1	0.245577	0.471415	normal very	normal
1893	13.676	6.02	-1.56307	0.423518	cool	normal
1894	17.74	7.1	-0.24439	1.070119	normal	wet
1895	17.28	3.33	-0.39365	-1.187	normal	dry
1896	18.744	5	0.08139	-0.18716	normal	normal
1897	16.704	10.28	-0.58055	2.973999	normal	ext. wet
1898	20.302	3.33	0.586928	-1.187	normal very	dry
1899	12.53	4.65	-1.93492	-0.39671	cool	normal
1900	20.698	3.78	0.715421	-0.91758	normal	normal
1901	17.596	4.1	-0.29111	-0.72599	normal	normal
1902	21.076	3.25	0.838074	-1.23489	normal	dry very
1903	18.83	8.02	0.109296	1.620927	normal very	wet
1904	12.448	4.56	-1.96153	-0.45059	cool	normal
1905	19.798	2.35	0.423391	-1.77373	normal	very dry
1906	19.542	6.26	0.340324	0.567207	normal	normal
1907	17.796	6.27	-0.22622	0.573194	normal	normal
1908	22.17	4.08	1.193053	-0.73797	warm	normal
1909	19.614	4.97	0.363687	-0.20512	normal	normal
1910	20.14	5.84	0.534362	0.315752	normal	normal
1911	18.258	3.11	-0.07631	-1.31871	normal ext.	dry
1912	11.126	3.4	-2.39049	-1.14509	cool	dry
1913	16.884	3.4	-0.52214	-1.14509	normal	dry
1914	21.01	3.21	0.816658	-1.25884	normal	dry
1915	18.96	3.46	0.151478	-1.10917	normal	dry
1916	15.396	7.47	-1.00496	1.29164	cool very	wet
1917	12.562	4.8	-1.92453	-0.3069	cool	normal
1918	17.15	1.78	-0.43583	-2.11499	normal	ext. dry
1919	21.944	6.74	1.119721	0.854586	warm very	normal
1920	13.596	6.65	-1.58902	0.800702	cool	normal
1921	21.932	4.32	1.115827	-0.59428	warm	normal
1922	16.004	7.33	-0.80768	1.207821	normal	wet
1923	16.188	6.73	-0.74798	0.848599	normal	normal
1924	21.166	2.63	0.867277	-1.60609	normal	very dry
1925	17.398	3.27	-0.35536	-1.22292	normal	dry
1926	18.05	3.9	-0.1438	-0.84574	normal	normal
1927	17.716	5.53	-0.25217	0.130153	normal	normal
1928	16.01	5.02	-0.80573	-0.17519	normal	normal
1929	17.412	3.97	-0.35081	-0.80383	normal	normal
1930	17.916	3.59	-0.18728	-1.03133	normal ext.	dry
1931	25.056	5.05	2.129498	-0.15722	warm	normal
1932	22.152	6.33	1.187213	0.609117	warm	normal
1933	17.682	5.45	-0.26321	0.082257	normal	normal
1934	17.51	3.81	-0.31902	-0.89962	normal	normal
1935	19.43	6.1	0.303983	0.471415	normal	normal

					ext.	
1936	11.642	5.94	-2.22305	0.375622	cool	normal
1937	14.596	5.92	-1.26455	0.363648	cool	normal
1938	19.774	4.72	0.415603	-0.3548	normal	normal
1939	17.2	6.98	-0.4196	0.998275	normal	normal
1940	19.964	3.9	0.477254	-0.84574	normal	normal
1941	18.152	6.57	-0.1107	0.752806	normal	normal
					very	
1942	23.706	3.67	1.691452	-0.98344	warm	normal
1943	14.792	4.51	-1.20095	-0.48053	cool	normal
1944	20.286	3.96	0.581736	-0.80981	normal	normal
1945	21.192	6.74	0.875713	0.854586	normal	normal
1946	19.452	5.19	0.311121	-0.07341	normal	normal
1947	18.792	3.91	0.096965	-0.83975	normal	normal
1948	14.982	6.84	-1.1393	0.914456	cool	normal
1949	17.494	7.03	-0.32421	1.02821	normal	wet
1950	16.284	6.62	-0.71683	0.782741	normal	normal
1951	14.066	7	-1.43652	1.010249	cool	wet
1952	16.616	6.8	-0.6091	0.890508	normal	normal
1953	20.872	4.86	0.77188	-0.27098	normal	normal
1954	21.108	6.47	0.848457	0.692935	normal	normal
1955	18.578	3.86	0.027527	-0.86968	normal	normal
1956	14.09	4.67	-1.42873	-0.38473	cool	normal
1957	18.066	4.53	-0.13861	-0.46855	normal	normal
1958	21.33	3.04	0.920492	-1.36062	normal	dry
1959	17.232	2.86	-0.40922	-1.46839	normal	dry
1960	17.386	3.51	-0.35925	-1.07923	normal	dry
1961	22.088	3.8	1.166446	-0.90561	warm	normal
1962	17.042	5.84	-0.47087	0.315752	normal	normal
1963	18.482	2.92	-0.00362	-1.43247	normal	dry
1964	20.022	3.72	0.496074	-0.9535	normal	normal
					very	
1965	13.77	7.51	-1.53256	1.315588	cool	wet
1966	18.816	8.79	0.104753	2.08193	normal	ext. wet
1967	16.766	5.28	-0.56043	-0.01952	normal	normal
1968	20.152	3.83	0.538256	-0.88764	normal	normal
1969	17.388	6.72	-0.3586	0.842611	normal	normal
1970	16.758	5.19	-0.56302	-0.07341	normal	normal
					very	
1971	16.08	8.28	-0.78302	1.77659	normal	wet
1972	15.06	6.57	-1.11399	0.752806	cool	normal
1973	20.526	5.04	0.659611	-0.16321	normal	normal
1974	17.994	4.65	-0.16197	-0.39671	normal	normal
					very	
1975	19.184	8.34	0.224161	1.812513	normal	wet
					very	
1976	20.142	7.96	0.535011	1.585005	normal	wet
1977	15.562	5.79	-0.9511	0.285816	normal	normal
1978	15.94	5.13	-0.82845	-0.10933	normal	normal
					very	
1979	13.118	7.68	-1.74412	1.417368	cool	wet
1980	18.704	3.87	0.068411	-0.8637	normal	normal
1981	22.616	3.61	1.337771	-1.01936	warm	dry
1982	16.392	5.38	-0.68178	0.040347	normal	normal

1983	22.802	7.48	1.398124	1.297627	warm	wet
1984	17.574	6.64	-0.29825	0.794715	normal	normal
1985	18.91	5.31	0.135254	-0.00156	normal	normal
1986	16.256	5.5	-0.72591	0.112192	normal ext.	normal
1987	24.716	2.78	2.019175	-1.51628	warm	very dry
1988	19.34	5.71	0.27478	0.23792	normal	normal
1989	17.426	6.62	-0.34627	0.782741	normal	normal
1990	20.348	5.1	0.601854	-0.12729	normal	normal
1991	21.154	4.75	0.863383	-0.33684	normal	normal
1992	21.984	7.15	1.1327	1.100054	warm	wet
1993	19.18	5	0.222863	-0.18716	normal	normal
1994	16.226	5.96	-0.73565	0.387596	normal	normal
1995	22.2	5.83	1.202788	0.309764	warm	normal
1996	14.206	5.88	-1.39109	0.3397	cool	normal
1997	16.244	9.91	-0.72981	2.752479	normal ext.	ext. wet
1998	24.784	5.87	2.04124	0.333713	warm very	normal
1999	23.638	5.85	1.669388	0.321739	warm ext.	normal
2000	26.198	4.36	2.500052	-0.57033	warm	normal very
2001	16.936	8.56	-0.50527	1.944228	normal ext.	wet
2002	25.514	6.31	2.278109	0.597143	warm	normal
2003	19.928	2.17	0.465573	-1.88149	normal	very dry
2004	21.042	5.08	0.827042	-0.13926	normal	normal
2005	21.396	5.11	0.941907	-0.1213	normal very	normal
2006	24.016	5.68	1.79204	0.219959	warm	normal

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## Nov-Mar southwest MN

YEAR	SW_T	SW_P	SW_Tz	SW_Pz	T_class	P_class
1892	21.032	6.84	-0.35203	1.318766	normal very	wet
1893	15.754	4.16	-1.98808	-0.30513	cool	normal
1894	20.114	3.9	-0.63659	-0.46267	normal	normal
1895	19.732	2.17	-0.755	-1.51092	normal	very dry
1896	22.078	4.51	-0.0278	-0.09305	normal	normal very
1897	17.768	7.33	-1.36379	1.615672	cool	wet
1898	22.68	2.63	0.158804	-1.2322	normal ext.	dry
1899	14.006	4.6	-2.52992	-0.03852	cool	normal
1900	22.264	4.28	0.029855	-0.23241	normal	normal
1901	21.56	2.82	-0.18837	-1.11707	normal	dry
1902	22.638	2.63	0.145785	-1.2322	normal	dry
1903	21.442	6.66	-0.22495	1.209699	normal very	wet
1904	17.22	2.67	-1.53366	-1.20796	cool	dry
1905	22.632	3.67	0.143926	-0.60203	normal	normal
1906	24.008	4.93	0.570452	0.161441	normal	normal
1907	22.708	3.09	0.167484	-0.95347	normal	normal
1908	25.526	3.49	1.040994	-0.7111	warm	normal
1909	23.328	6.43	0.359668	1.070335	normal	wet
1910	23.036	5.51	0.269156	0.51288	normal	normal
1911	22.422	2.28	0.078831	-1.44427	normal very	dry
1912	15.728	3.09	-1.99614	-0.95347	cool	normal
1913	22.598	1.58	0.133386	-1.86842	normal	very dry
1914	25.688	2.88	1.09121	-1.08071	warm	dry
1915	21.852	5.38	-0.09786	0.434109	normal	normal
1916	20.046	5.98	-0.65767	0.797667	normal very	normal
1917	17.03	6.23	-1.59256	0.949149	cool	normal
1918	20.936	2.91	-0.38179	-1.06254	normal	dry
1919	26.382	9.3	1.306333	2.809353	warm	ext. wet
1920	19.564	6.16	-0.80708	0.906734	normal very	normal
1921	27.146	4.73	1.543154	0.040255	warm	normal
1922	20.84	4.08	-0.41155	-0.3536	normal	normal
1923	22.066	5.67	-0.03152	0.609829	normal	normal
1924	25.19	3.56	0.936842	-0.66868	normal	normal
1925	21.332	2.79	-0.25904	-1.13525	normal	dry
1926	23.49	2.63	0.409884	-1.2322	normal	dry
1927	23.314	5.8	0.355329	0.688599	normal	normal
1928	21.998	5.46	-0.0526	0.482583	normal	normal
1929	20.686	3.8	-0.45929	-0.52326	normal	normal
1930	22.672	1.79	0.156325	-1.74118	normal ext.	very dry
1931	29.966	4	2.417285	-0.40207	warm	normal very
1932	24.736	7.51	0.796114	1.724739	normal	wet
1933	22.91	3.99	0.230099	-0.40813	normal	normal
1934	24.168	2.15	0.620048	-1.52304	normal	very dry

1935	25.572	3.96	1.055253	-0.42631	warm ext.	normal
1936	14.284	5.99	-2.44375	0.803726	cool	normal
1937	18.94	5.18	-1.0005	0.312923	cool	normal
1938	22.224	4.5	0.017456	-0.09911	normal	normal
1939	22.894	4.05	0.225139	-0.37178	normal	normal
1940	23.558	3.18	0.430963	-0.89894	normal	normal
1941	22.536	4.89	0.114168	0.137204	normal very	normal
1942	27.034	5.21	1.508437	0.331101	warm	normal
1943	19.898	3.14	-0.70355	-0.92317	normal	normal
1944	24.604	4.68	0.755197	0.009958	normal	normal
1945	26.108	4.01	1.2214	-0.39601	warm	normal
1946	23.518	6.08	0.418564	0.85826	normal	normal
1947	23.016	3.31	0.262956	-0.82017	normal	normal
1948	19.662	4.85	-0.7767	0.112966	normal	normal
1949	20.912	6.53	-0.38923	1.130928	normal	wet
1950	21.082	3.35	-0.33654	-0.79593	normal	normal
1951	17.948	5.97	-1.308	0.791607	cool	normal
1952	19.666	5.42	-0.77546	0.458346	normal	normal
1953	24.658	4.76	0.771936	0.058433	normal	normal
1954	24.876	6.18	0.83951	0.918853	normal	normal
1955	23.212	2.21	0.323711	-1.48669	normal very	dry
1956	16.632	3.35	-1.71593	-0.79593	cool	normal
1957	22.938	4.54	0.238778	-0.07487	normal	normal
1958	24.732	3.01	0.794874	-1.00194	normal	dry
1959	21.346	2.69	-0.2547	-1.19584	normal	dry
1960	19.388	4.43	-0.86163	-0.14152	normal	normal
1961	24.732	3.99	0.794874	-0.40813	normal	normal
1962	19.142	5.74	-0.93789	0.652244	normal	normal
1963	23.05	2.5	0.273495	-1.31097	normal	dry
1964	24.058	2.25	0.58595	-1.46245	normal	dry
1965	17.386	4.59	-1.4822	-0.04458	cool	normal
1966	22.966	4.39	0.247457	-0.16576	normal	normal
1967	21.706	3.2	-0.14311	-0.88682	normal	normal
1968	24.556	2.24	0.740318	-1.46851	normal very	dry
1969	18.406	7.65	-1.16603	1.809569	cool	wet
1970	19.42	4.11	-0.85172	-0.33542	normal	normal
1971	20.048	6.01	-0.65705	0.815845	normal	normal
1972	19.372	4.97	-0.86659	0.185678	normal	normal
1973	24.502	5.67	0.723579	0.609829	normal	normal
1974	22.358	4.73	0.058992	0.040255	normal	normal
1975	21.75	5.13	-0.12947	0.282627	normal	normal
1976	24.948	6.84	0.861828	1.318766	normal	wet
1977	20.47	6.39	-0.52624	1.046098	normal	wet
1978	17.442	5.22	-1.46485	0.33716	cool ext.	normal very
1979	14.732	7.2	-2.30488	1.536901	cool	wet
1980	23.484	3.36	0.408025	-0.78987	normal very	normal
1981	27.628	2.88	1.692562	-1.08071	warm	dry
1982	20.204	4.81	-0.60869	0.088729	normal	normal

1983	25.332	9.23	0.980859	2.766938	normal	ext. wet
1984	19.586	9	-0.80026	2.627574	normal	ext. wet
1985	22.998	5.29	0.257377	0.379575	normal	normal
1986	19.034	5.33	-0.97137	0.403813	normal	normal
					very	
1987	28.252	4.8	1.885987	0.08267	warm	normal
1988	22.52	5.37	0.109208	0.42805	normal	normal
1989	22.336	5.14	0.052173	0.288686	normal	normal
1990	24.67	4.4	0.775655	-0.1597	normal	normal
1991	24.508	3.66	0.725439	-0.60809	normal	normal
1992	26.402	6.16	1.312533	0.906734	warm	normal
1993	19.888	5.33	-0.70665	0.403813	normal	normal
1994	19.136	5.33	-0.93975	0.403813	normal	normal
1995	25.692	5.49	1.09245	0.500761	warm	normal
1996	19.552	4.33	-0.8108	-0.20212	normal	normal
1997	17.44	8.04	-1.46547	2.045882	cool	ext. wet
1998	25.44	6.04	1.014336	0.834023	warm	normal
1999	26.592	4.58	1.371428	-0.05063	warm	normal
					ext.	
2000	29.99	2.73	2.424724	-1.1716	warm	dry
					very	
2001	17.062	7.1	-1.58264	1.476308	cool	wet
					very	
2002	27.832	6.65	1.755797	1.20364	warm	wet
2003	23.186	2.1	0.315652	-1.55334	normal	very dry
2004	23.958	4.43	0.554953	-0.14152	normal	normal
2005	26.256	3.51	1.267276	-0.69898	warm	normal
2006	25.738	6.86	1.106709	1.330885	warm	wet

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### Nov-Mar south-central MN

YEAR	SC_T	SC_P	SC_Tz	SC_Pz	T_class	P_class
1892	21.412	6.16	-0.34926	0.326405	normal ext.	normal
1893	14.908	6.06	-2.4269	0.269385	cool	normal
1894	20.98	5.73	-0.48726	0.081217	normal	normal
1895	19.692	3.37	-0.8987	-1.26447	normal	dry
1896	23.506	3.92	0.319653	-0.95085	normal	normal very
1897	19.502	8.82	-0.95939	1.84315	normal	wet
1898	23.802	3.59	0.414207	-1.13902	normal ext.	dry
1899	16.152	6.15	-2.02952	0.320703	cool	normal
1900	23.534	4.4	0.328597	-0.67716	normal	normal
1901	21.594	3.14	-0.29112	-1.39561	normal	dry
1902	23.22	3.15	0.228292	-1.38991	normal	dry
1903	23.058	6.76	0.176543	0.668528	normal very	normal
1904	17.064	3.3	-1.73819	-1.30438	cool	dry
1905	21.87	4.75	-0.20295	-0.47758	normal	normal
1906	25.17	6.54	0.851203	0.543083	normal	normal
1907	22.938	4.85	0.13821	-0.42056	normal	normal
1908	26.62	3.71	1.314393	-1.0706	warm	dry
1909	23.764	6.82	0.402068	0.70274	normal	normal
1910	23.506	7.68	0.319653	1.193116	normal	wet
1911	23.622	3.1	0.356708	-1.41842	normal very	dry
1912	16.572	4.62	-1.89535	-0.55171	cool	normal
1913	23	3.99	0.158015	-0.91094	normal	normal
1914	26.47	3.16	1.266477	-1.38421	warm	dry
1915	22.51	5.64	0.001489	0.029899	normal	normal
1916	21.102	6.45	-0.44828	0.491765	normal very	normal
1917	17.502	6.73	-1.59827	0.651422	cool	normal
1918	21.414	3.75	-0.34862	-1.04779	normal	dry very
1919	26.916	8.27	1.408948	1.529537	warm	wet
1920	19.466	6.94	-0.97089	0.771165	normal	normal
1921	27.06	4.74	1.454947	-0.48329	warm	normal
1922	21.206	4.73	-0.41506	-0.48899	normal	normal
1923	22.04	6.43	-0.14865	0.48036	normal	normal
1924	25.1	4.29	0.828842	-0.73988	normal	normal
1925	21.638	4.02	-0.27706	-0.89383	normal	normal dry
1926	23.368	3.65	0.27557	-1.10481	normal	dry
1927	23.002	6.64	0.158654	0.600103	normal	normal
1928	22.528	5.43	0.007239	-0.08984	normal	normal
1929	20.51	5.23	-0.63739	-0.20389	normal	normal
1930	22.258	3.35	-0.07901	-1.27587	normal ext.	dry
1931	28.854	4.02	2.028025	-0.89383	warm	normal
1932	25.074	9.61	0.820537	2.293612	normal	ext. wet
1933	22.852	7.14	0.110738	0.885206	normal	normal
1934	24.388	3.25	0.6014	-1.33289	normal	dry
1935	24.77	7.39	0.723427	1.027757	normal	wet

1936	14.782	7.57	-2.46715	1.130394	cool	wet
1937	19.13	6.05	-1.07822	0.263683	cool	normal
1938	23.358	4.3	0.272375	-0.73418	normal	normal
1939	23.36	5.8	0.273014	0.121131	normal	normal
1940	23.554	3.48	0.334986	-1.20174	normal	dry
1941	22.34	7.49	-0.05282	1.084778	normal	wet
					very	
1942	27.226	5.14	1.507975	-0.2552	warm	normal
1943	19.338	4.66	-1.01178	-0.5289	cool	normal
1944	24.412	4.92	0.609066	-0.38065	normal	normal
1945	25.542	5.8	0.970035	0.121131	normal	normal
						very
1946	24.46	8.32	0.6244	1.558048	normal	wet
1947	23.406	5.05	0.287708	-0.30652	normal	normal
1948	19.782	6.29	-0.86995	0.400532	normal	normal
1949	22.21	9.35	-0.09434	2.145359	normal	ext. wet
1950	21.602	5.49	-0.28856	-0.05563	normal	normal
					very	very
1951	17.188	8.8	-1.69858	1.831746	cool	wet
1952	20.798	6.69	-0.54539	0.628614	normal	normal
1953	24.956	5.68	0.782843	0.052707	normal	normal
1954	26.396	6.12	1.242838	0.303597	warm	normal
1955	23.376	3.37	0.278125	-1.26447	normal	dry
					very	
1956	17.602	4.56	-1.56633	-0.58592	cool	normal
1957	23.734	4.25	0.392485	-0.76269	normal	normal
1958	24.986	3.43	0.792426	-1.23025	normal	dry
1959	21.252	3.39	-0.40037	-1.25306	normal	dry
1960	21.308	4.18	-0.38248	-0.8026	normal	normal
1961	25.104	5.8	0.83012	0.121131	normal	normal
1962	19.512	5.31	-0.9562	-0.15827	normal	normal
1963	22.782	3.12	0.088377	-1.40702	normal	dry
1964	24.482	2.37	0.631427	-1.83467	normal	very dry
1965	18.034	7.43	-1.42833	1.050565	cool	wet
1966	23.198	6.19	0.221265	0.343511	normal	normal
1967	21.984	5.03	-0.16654	-0.31793	normal	normal
1968	24.906	1.83	0.766871	-2.14258	normal	ext. dry
1969	19.738	6.94	-0.884	0.771165	normal	normal
1970	19.196	4.83	-1.05714	-0.43197	cool	normal
						very
1971	19.946	8.29	-0.81756	1.540941	normal	wet
1972	19.77	5.4	-0.87378	-0.10695	normal	normal
1973	24.37	7.29	0.59565	0.970737	normal	normal
1974	22.256	6.85	-0.07965	0.719846	normal	normal
1975	21.816	6.7	-0.2202	0.634316	normal	normal
						very
1976	26.538	8.87	1.288199	1.87166	warm	wet
1977	20.282	5.88	-0.71023	0.166748	normal	normal
					very	
1978	17.468	4.3	-1.60913	-0.73418	cool	normal
					ext.	very
1979	15.138	8.66	-2.35343	1.751917	cool	wet
1980	22.892	5.23	0.123516	-0.20389	normal	normal



1981	27.078	3.3	1.460697	-1.30438	warm	dry
1982	19.956	5.3	-0.81436	-0.16397	normal	normal
1983	26.158	10.21	1.166811	2.635735	warm	ext. wet
1984	19.718	7.96	-0.89039	1.352774	normal	wet
1985	23.338	7.39	0.265986	1.027757	normal	wet
1986	19.456	5.62	-0.97409	0.018494	normal very	normal
1987	28.458	2.98	1.901527	-1.48685	warm	dry
1988	23.28	6.27	0.247459	0.389128	normal	normal
1989	22.58	6.07	0.02385	0.275087	normal	normal
1990	24.914	5.4	0.769426	-0.10695	normal	normal
1991	24.28	5.2	0.5669	-0.22099	normal	normal very
1992	25.536	8.95	0.968119	1.917277	normal	wet
1993	20.48	7.03	-0.64698	0.822483	normal	normal
1994	19.63	4.7	-0.9185	-0.50609	normal	normal
1995	25.952	5.18	1.101006	-0.2324	warm	normal
1996	19.464	5.75	-0.97153	0.092621	normal	normal
1997	18.884	7.79	-1.15681	1.255839	cool	wet
1998	25.994	6.25	1.114423	0.377724	warm	normal
1999	26.78	4.69	1.365504	-0.5118	warm ext.	normal
2000	29.42	4.08	2.208829	-0.85962	warm very	normal
2001	17.176	8.14	-1.70241	1.455411	cool ext.	wet
2002	28.78	5.99	2.004387	0.22947	warm	normal
2003	23.584	3.25	0.344569	-1.33289	normal	dry
2004	24.496	5.69	0.6359	0.058409	normal	normal
2005	25.974	5.17	1.108034	-0.2381	warm	normal
2006	25.724	6.24	1.028174	0.372021	warm	normal

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**Nov-Mar southeast MN**

YEAR	SE_T	SE_P	SE_Tz	SE_Pz	T_class	P_class
1892	22.434	7.34	-0.07298	0.610246	normal ext.	normal
1893	15.674	7.67	-2.2742	0.793785	cool	normal
1894	20.942	6.51	-0.55881	0.14862	normal	normal
1895	18.896	3.88	-1.22504	-1.31412	cool	dry
1896	22.23	4.86	-0.13941	-0.76907	normal	normal very
1897	20.258	8.98	-0.78154	1.522376	normal	wet
1898	22.678	5.42	0.006473	-0.45761	normal ext.	normal
1899	15.104	6.72	-2.45981	0.265417	cool	normal
1900	21.946	6.01	-0.23188	-0.12947	normal	normal
1901	20.858	4.85	-0.58616	-0.77463	normal	normal
1902	22.502	4.09	-0.05084	-1.19733	normal	dry
1903	23.762	8.7	0.35945	1.366646	normal	wet very
1904	17.068	4.05	-1.82028	-1.21957	cool	dry
1905	21.842	5.25	-0.26575	-0.55216	normal	normal
1906	23.458	8	0.26046	0.977323	normal	normal
1907	23.376	6.82	0.233759	0.321035	normal	normal
1908	26.354	4.77	1.203468	-0.81913	warm	normal
1909	23.642	6.37	0.320375	0.070755	normal	normal
1910	23.72	8.27	0.345773	1.12749	normal	wet
1911	23.404	3.58	0.242876	-1.48098	normal ext.	dry
1912	16.4	5.22	-2.0378	-0.56885	cool	normal
1913	22.972	5.91	0.102206	-0.18509	normal	normal
1914	26.526	4.01	1.259475	-1.24182	warm	dry
1915	22.182	5.29	-0.15504	-0.52992	normal	normal
1916	21.858	6.35	-0.26054	0.059632	normal very	normal
1917	17.2	6.28	-1.7773	0.020699	cool	normal
1918	20.772	4.12	-0.61417	-1.18064	normal very	dry
1919	27.514	7.09	1.581192	0.471202	warm	normal
1920	18.532	7.07	-1.34357	0.460079	cool	normal
1921	27.184	6.19	1.473736	-0.02936	warm	normal
1922	21.546	6.33	-0.36213	0.048508	normal	normal
1923	21.472	6.5	-0.38623	0.143058	normal	normal
1924	24.49	5.37	0.596504	-0.48542	normal	normal
1925	22.556	4.29	-0.03325	-1.08609	normal	dry
1926	22.49	4.99	-0.05474	-0.69677	normal	normal
1927	23.002	6.68	0.111975	0.24317	normal	normal
1928	23.212	5.78	0.180356	-0.25739	normal	normal
1929	20.946	6.75	-0.55751	0.282102	normal	normal
1930	22.41	4.08	-0.08079	-1.20289	normal very	dry
1931	28.66	4.44	1.954357	-1.00267	warm	dry
1932	25.852	10.7	1.040004	2.478999	warm	ext. wet
1933	23.416	8.02	0.246784	0.988446	normal	normal
1934	23.862	3.41	0.392012	-1.57553	normal	very dry
1935	23.906	8.87	0.406339	1.461196	normal	wet

					very	
1936	16.652	7.36	-1.95574	0.62137	cool	normal
1937	19.826	5.8	-0.92221	-0.24627	normal	normal
1938	25.082	5.52	0.789274	-0.40199	normal	normal
1939	23.59	6.62	0.303442	0.209799	normal	normal
1940	23.054	3.59	0.128908	-1.47541	normal	dry
1941	22.408	8.41	-0.08145	1.205355	normal	wet
1942	27.058	5.93	1.432707	-0.17396	warm	normal
1943	19.218	5.4	-1.12019	-0.46874	cool	normal
1944	24.862	4.73	0.717636	-0.84137	normal	normal
1945	25.218	6.7	0.833559	0.254294	normal	normal
1946	25.068	8.14	0.784715	1.055187	normal	wet
1947	24.304	5	0.535938	-0.69121	normal	normal
1948	20.056	5.94	-0.84731	-0.1684	normal	normal
						very
1949	23.43	9.71	0.251342	1.928384	normal	wet
1950	22.178	6.34	-0.15634	0.05407	normal	normal
						very
1951	17.914	8.51	-1.5448	1.260973	cool	wet
1952	21.688	7.27	-0.3159	0.571314	normal	normal
1953	25.476	5.76	0.91757	-0.26851	normal	normal
1954	27.238	5.61	1.49132	-0.35194	warm	normal
1955	23.314	3.42	0.21357	-1.56996	normal	very dry
1956	18.616	5.31	-1.31621	-0.51879	cool	normal
1957	24.308	3.62	0.53724	-1.45873	normal	dry
1958	25.022	4.04	0.769736	-1.22514	normal	dry
1959	20.504	5.12	-0.70143	-0.62447	normal	normal
1960	22.366	4.36	-0.09512	-1.04716	normal	dry
1961	25.432	6.49	0.903242	0.137496	normal	normal
1962	19.836	5.93	-0.91895	-0.17396	normal	normal
1963	21.622	3.48	-0.33739	-1.53659	normal	very dry
1964	24.492	3.68	0.597155	-1.42536	normal	dry
1965	18.452	7.15	-1.36962	0.504573	cool	normal
1966	23.292	8.5	0.206406	1.255411	normal	wet
1967	21.828	6.9	-0.27031	0.365529	normal	normal
1968	24.486	2.08	0.595202	-2.31524	normal	ext. dry
1969	20.676	6.81	-0.64543	0.315473	normal	normal
1970	19.738	5.11	-0.95086	-0.63003	normal	normal
						very
1971	19.584	8.99	-1.00101	1.527937	cool	wet
1972	19.88	6.11	-0.90462	-0.07385	normal	normal
1973	24.038	8.06	0.449322	1.010693	normal	wet
1974	22.15	7.16	-0.16546	0.510135	normal	normal
1975	22.04	6.48	-0.20128	0.131935	normal	normal
1976	25.986	10.6	1.083638	2.423381	warm	ext. wet
1977	19.284	5.12	-1.0987	-0.62447	cool	normal
						very
1978	17.486	4.59	-1.68417	-0.91924	cool	normal
						ext.
1979	16.002	8.18	-2.16739	1.077435	cool	wet
1980	23.126	5.66	0.152353	-0.32413	normal	normal
1981	26.892	4.05	1.378654	-1.21957	warm	dry
1982	20.342	5.46	-0.75419	-0.43537	normal	normal
1983	27.094	10.61	1.44443	2.428943	warm	ext. wet

1984	20.738	8.84	-0.62524	1.444511	normal	wet
1985	23.066	7.88	0.132815	0.910582	normal	normal
1986	19.332	6.61	-1.08307	0.204238	cool very	normal
1987	27.374	3.77	1.535604	-1.3753	warm	dry
1988	24.242	7.08	0.515749	0.465641	normal	normal
1989	23.136	7.11	0.155609	0.482326	normal	normal
1990	24.866	6.35	0.718939	0.059632	normal	normal
1991	24.772	5.77	0.68833	-0.26295	normal	normal
1992	25.586	11.36	0.953388	2.846075	normal	ext. wet
1993	21.758	8.63	-0.2931	1.327714	normal	wet
1994	20.598	4.96	-0.67083	-0.71345	normal	normal
1995	26.542	5.56	1.264685	-0.37975	warm	normal
1996	19.46	6.69	-1.04139	0.248732	cool	normal very
1997	20.072	9.5	-0.8421	1.811587	normal very	wet
1998	27.51	7.39	1.579889	0.638055	warm very	normal
1999	27.336	5.01	1.523231	-0.68564	warm ext.	normal
2000	29.218	5	2.136056	-0.69121	warm	normal
2001	18.696	8.28	-1.29016	1.133052	cool ext.	wet
2002	30.012	6.59	2.394601	0.193114	warm	normal
2003	23.302	3.65	0.209662	-1.44204	normal	dry
2004	24.912	6.95	0.733917	0.393338	normal	normal
2005	25.638	6.92	0.970321	0.376652	normal	normal
2006	26.202	6.73	1.153973	0.270979	warm	normal

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**Water year (Oct-Sep) northwest MN**

Year	NW_T	NW_P	NW_Tz	NW_Pz	T_class	P_class
1892	37.363	21.16	-0.41786	-0.22634	normal very	normal
1893	34.338	21.74	-1.91646	-0.06789	cool	normal
1894	38.083	17.21	-0.06117	-1.30541	normal	dry
1895	36.935	23.37	-0.6299	0.377396	normal	normal
1896	36.732	24.62	-0.73046	0.718875	normal	normal
1897	35.978	24.24	-1.104	0.615065	cool	normal
1898	37.612	20.45	-0.29451	-0.4203	normal very	normal
1899	34.593	23.18	-1.79013	0.325491	cool	normal
1900	40.276	25.15	1.025249	0.863662	warm	normal
1901	39.242	25.03	0.513001	0.83088	normal	normal
1902	39.429	23.09	0.605642	0.300905	normal	normal
1903	37.871	22.9	-0.1662	0.249	normal very	normal
1904	35.032	23.22	-1.57265	0.336419	cool	normal very
1905	38.843	28.08	0.315335	1.664087	normal	wet
1906	39.152	23.41	0.468415	0.388323	normal very	normal
1907	34.423	22.47	-1.87435	0.131532	cool	normal
1908	39.442	20.52	0.612082	-0.40117	normal	normal
1909	38.022	23.4	-0.09139	0.385592	normal	normal
1910	39.079	14.31	0.432251	-2.09764	normal	ext. dry
1911	37.586	21.41	-0.30739	-0.15804	normal very	normal
1912	35.118	23.26	-1.53004	0.347346	cool	normal
1913	37.447	17.45	-0.37625	-1.23985	normal	dry
1914	38.75	23.18	0.269263	0.325491	normal	normal
1915	37.953	22.65	-0.12557	0.180704	normal	normal
1916	35.64	24.4	-1.27144	0.658774	cool ext.	normal
1917	34.053	13.14	-2.05765	-2.41726	cool	ext. dry
1918	35.852	17.32	-1.16642	-1.27536	cool	dry
1919	40.262	26.1	1.018313	1.123185	warm very	wet
1920	34.547	19.68	-1.81292	-0.63065	cool	normal
1921	41.214	21.85	1.489937	-0.03784	warm	normal
1922	38.863	20.68	0.325243	-0.35747	normal	normal
1923	37.634	20.31	-0.28361	-0.45854	normal	normal
1924	37.969	19.3	-0.11765	-0.73446	normal	normal
1925	38.108	26.86	-0.04879	1.330804	normal	wet
1926	37.745	16.45	-0.22862	-1.51303	normal	very dry
1927	36.596	22.22	-0.79784	0.063236	normal	normal
1928	36.714	22.82	-0.73938	0.227146	normal	normal
1929	37.318	13.59	-0.44016	-2.29433	normal	ext. dry
1930	38.676	19.4	0.232603	-0.70714	normal very	normal
1931	41.771	19.96	1.765877	-0.55416	warm	normal
1932	40.377	19.18	1.075285	-0.76724	warm	normal
1933	38.396	17.88	0.09389	-1.12238	normal	dry
1934	37.338	15.93	-0.43025	-1.65508	normal	very dry

1935	38.898	21.9	0.342582	-0.02418	normal	normal
1936	35.188	13.58	-1.49537	-2.29706	cool	ext. dry
1937	36.423	23.74	-0.88354	0.478474	normal	normal
1938	38.678	18.38	0.233594	-0.98579	normal	normal
1939	38.176	17.6	-0.0151	-1.19887	normal	dry
1940	39.26	18.02	0.521919	-1.08413	normal	dry
1941	40.073	29.76	0.924682	2.123034	normal	ext. wet
1942	40.233	23.11	1.003946	0.306369	warm	normal
1943	36.142	21.24	-1.02275	-0.20448	cool	normal
1944	39.497	26.42	0.639329	1.210604	normal	wet
1945	38.614	22.38	0.201888	0.106945	normal	normal
1946	38.323	19.95	0.057725	-0.55689	normal	normal
1947	37.156	23.76	-0.52041	0.483937	normal	normal
1948	38.179	20.32	-0.01361	-0.45581	normal	normal
1949	38.678	23.32	0.233594	0.363737	normal	normal
1950	35.392	27.23	-1.3943	1.431882	cool	wet
1951	36.362	20.11	-0.91376	-0.51318	normal	normal
1952	38.353	18.7	0.072587	-0.89837	normal	normal
1953	39.837	22.41	0.807767	0.115141	normal	normal
1954	39.383	18.61	0.582853	-0.92295	normal	normal
1955	40.112	21.83	0.944003	-0.04331	normal	normal
1956	35.12	20.84	-1.52905	-0.31376	cool	normal
1957	38.659	26.72	0.224181	1.292559	normal	wet
1958	40.319	16.47	1.046551	-1.50757	warm	very dry
1959	37.946	22.98	-0.12904	0.270855	normal	normal
1960	37.748	21.61	-0.22713	-0.10341	normal	normal
1961	39.542	17.9	0.661622	-1.11691	normal	dry
1962	36.954	27.15	-0.62048	1.410027	normal	wet
1963	40.087	18.71	0.931617	-0.89564	normal	normal
1964	39.475	25.07	0.62843	0.841807	normal	normal
1965	34.789	24.77	-1.69303	0.759852	cool	normal
1966	37.164	23.91	-0.51645	0.524915	normal	normal
1967	36.103	16.59	-1.04207	-1.47478	cool	dry
1968	37.983	26.5	-0.11071	1.232458	normal	wet
1969	37.436	21.31	-0.3817	-0.18536	normal	normal
1970	36.952	22.28	-0.62147	0.079627	normal	normal
1971	36.827	21.49	-0.6834	-0.13619	normal	normal
1972	36.697	23.41	-0.7478	0.388323	normal	normal
1973	39.063	22.93	0.424324	0.257196	normal	normal
1974	36.651	23.43	-0.77059	0.393787	normal	normal
1975	38.196	23.44	-0.00519	0.396519	normal	normal
1976	40.53	15.93	1.151081	-1.65508	warm	very dry
1977	38.295	22.85	0.043854	0.235341	normal	normal
1978	36.987	22.89	-0.60413	0.246268	normal	normal
1979	33.858	20.88	-2.15425	-0.30283	cool	normal
1980	38.934	17.49	0.360417	-1.22892	normal	dry
1981	40.45	23.13	1.111449	0.311832	warm	normal
1982	36.975	22.24	-0.61008	0.0687	normal	normal
1983	41.214	26.13	1.489937	1.131381	warm	wet
1984	38.942	17.74	0.36438	-1.16062	normal	dry

1985	38.112	30.39	-0.0468	2.295139	normal	ext. wet
1986	37.733	23	-0.23456	0.276318	normal ext.	normal
1987	42.709	20.17	2.230566	-0.49679	warm	normal
1988	40.938	16.8	1.353206	-1.41741	warm	dry
1989	37.639	20.14	-0.28113	-0.50498	normal	normal
1990	39.557	16.35	0.669054	-1.54035	normal	very dry
1991	40.717	25.57	1.243722	0.978398	warm	normal
1992	38.852	22.77	0.319794	0.213486	normal	normal
1993	36.916	24.5	-0.63931	0.686093	normal	normal
1994	37.117	23.43	-0.53973	0.393787	normal	normal
1995	40.493	25.37	1.132751	0.923762	warm	normal
1996	35.352	23.06	-1.41412	0.292709	cool	normal
1997	36.297	27.36	-0.94596	1.467396	normal ext.	wet
1998	43.424	25.14	2.58478	0.86093	warm very	normal
1999	41.545	33.4	1.653916	3.11742	warm ext.	ext. wet
2000	42.61	22.07	2.181521	0.022258	warm	normal
2001	39.546	26.66	0.663604	1.276168	normal very	wet very
2002	41.818	28.02	1.789161	1.647696	warm	wet
2003	39.038	18.97	0.411939	-0.82461	normal	normal
2004	38.368	26.21	0.080018	1.153235	normal	wet
2005	40.751	26.39	1.260566	1.202408	warm ext.	wet
2006	42.988	21.18	2.368784	-0.22087	warm	normal

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## Water year (Oct-Sep) north-central MN

Year	NC_T	NC_P	NC_Tz	NC_Pz	T_class	P_class
1892	36.895	22.14	-0.42423	-0.67876	normal very	normal
1893	34.463	24.72	-1.71044	-0.03071	cool	normal
1894	37.374	21.24	-0.17091	-0.90483	normal	normal
1895	36.109	28.34	-0.83992	0.878572	normal	normal
1896	36.076	27.65	-0.85738	0.705256	normal	normal
1897	35.44	28.93	-1.19373	1.02677	cool	wet
1898	36.374	24.73	-0.69977	-0.0282	normal ext.	normal
1899	33.804	30.36	-2.05896	1.385962	cool	wet
1900	39.428	28.71	0.915385	0.97151	normal	normal
1901	38.653	27.33	0.505514	0.624878	normal	normal
1902	38.624	26	0.490176	0.290804	normal	normal
1903	37.158	26.75	-0.28514	0.479192	normal very	normal
1904	33.977	24.3	-1.96747	-0.13621	cool	normal
1905	37.835	33.55	0.072901	2.187236	normal	ext. wet
1906	38.809	25.16	0.588017	0.079811	normal very	normal
1907	34.422	26.17	-1.73212	0.333505	cool	normal
1908	38.694	23.24	0.527197	-0.40246	normal	normal
1909	37.346	23.95	-0.18571	-0.22412	normal	normal
1910	39.343	18.57	0.870431	-1.57549	normal	very dry
1911	37.889	23.45	0.10146	-0.34971	normal very	normal
1912	34.681	20.85	-1.59514	-1.00279	cool	dry
1913	37.394	23.04	-0.16033	-0.4527	normal	normal
1914	38.627	27.2	0.491763	0.592224	normal	normal
1915	38.523	24.72	0.436761	-0.03071	normal	normal
1916	36.673	28.76	-0.54164	0.984069	normal very	normal
1917	34.463	13.88	-1.71044	-2.75353	cool	ext. dry
1918	35.843	18.53	-0.9806	-1.58553	normal	very dry
1919	40.188	29.23	1.317324	1.102125	warm very	wet
1920	34.697	22.28	-1.58668	-0.6436	cool very	normal
1921	41.057	22.19	1.776908	-0.6662	warm	normal
1922	38.168	19.31	0.249013	-1.38961	normal	dry
1923	37.028	20.49	-0.35389	-1.09321	normal	dry
1924	36.942	19.67	-0.39938	-1.29918	normal	dry
1925	37.477	24.61	-0.11643	-0.05834	normal	normal
1926	36.22	20.5	-0.78122	-1.0907	normal	dry
1927	35.813	24.6	-0.99647	-0.06085	normal	normal
1928	35.577	26.26	-1.12128	0.356112	cool	normal
1929	36.89	15.23	-0.42688	-2.41444	normal	ext. dry
1930	37.749	19.03	0.027418	-1.45994	normal very	dry
1931	41.367	20.24	1.940857	-1.15601	warm	dry
1932	40.277	23.15	1.364393	-0.42507	warm	normal
1933	37.616	21.18	-0.04292	-0.9199	normal	normal
1934	36.203	20.01	-0.79021	-1.21378	normal	dry



1935	37.918	26.72	0.116797	0.471656	normal	normal
1936	35.054	16.84	-1.39788	-2.01003	cool	ext. dry very
1937	35.952	30.86	-0.92295	1.511554	normal	wet
1938	38.435	21.31	0.390221	-0.88724	normal	normal
1939	37.396	23.53	-0.15927	-0.32962	normal	normal
1940	38.552	19.39	0.452098	-1.36952	normal	dry
1941	39.714	30.74	1.066641	1.481412	warm	wet
1942	39.731	24.91	1.075632	0.017015	warm	normal
1943	35.831	24.11	-0.98695	-0.18393	normal	normal
1944	38.996	30.7	0.686915	1.471364	normal	wet
1945	38.076	23.6	0.200358	-0.31203	normal	normal
1946	37.85	22.63	0.080834	-0.55568	normal	normal
1947	36.919	27.1	-0.41154	0.567106	normal	normal
1948	37.833	20.31	0.071843	-1.13843	normal	dry
1949	38.149	27.45	0.238965	0.65502	normal	normal
1950	34.894	30.22	-1.4825	1.350796	cool	wet
1951	35.654	26.11	-1.08056	0.318434	cool	normal
1952	37.951	22.91	0.134249	-0.48535	normal	normal
1953	38.929	28.26	0.651481	0.858478	normal	normal
1954	38.576	21.56	0.464791	-0.82445	normal	normal
1955	39.571	23.15	0.991013	-0.42507	normal	normal
1956	35.248	20.53	-1.29528	-1.08317	cool	dry
1957	37.592	27.4	-0.05561	0.64246	normal	normal
1958	39.241	19.06	0.816487	-1.45241	normal	dry
1959	37.381	25.47	-0.1672	0.157677	normal	normal
1960	36.925	21.84	-0.40837	-0.75412	normal	normal
1961	38.821	22.54	0.594363	-0.57829	normal	normal
1962	36.473	30.72	-0.64742	1.476388	normal	wet
1963	38.636	22.62	0.496523	-0.55819	normal	normal
1964	38.769	27.71	0.566862	0.720327	normal	normal
1965	34.273	27.04	-1.81092	0.552035	cool	very normal
1966	36.759	28.18	-0.49616	0.838383	normal	normal
1967	35.622	20.29	-1.09748	-1.14345	cool	dry
1968	37.454	28.37	-0.1286	0.886108	normal	normal
1969	37.488	27.19	-0.11062	0.589712	normal	normal
1970	36.909	22.47	-0.41683	-0.59587	normal	normal
1971	36.277	25.73	-0.75107	0.222985	normal	normal
1972	36.111	29.9	-0.83886	1.270418	normal	wet
1973	38.598	25.73	0.476426	0.222985	normal	normal
1974	36.847	26.2	-0.44962	0.341041	normal	normal
1975	38.235	27.79	0.284447	0.740422	normal	normal
1976	39.61	19.39	1.011639	-1.36952	warm	dry
1977	37.653	26.93	-0.02335	0.524404	normal	normal
1978	36.869	29.49	-0.43798	1.167433	normal	wet
1979	34.099	22.21	-1.90294	-0.66118	cool	very normal
1980	38.123	22.07	0.225214	-0.69634	normal	normal
1981	39.289	25.42	0.841873	0.145118	normal	normal
1982	36.785	26.26	-0.48241	0.356112	normal	normal
1983	40.903	27.57	1.695463	0.685162	warm	very normal

1984	38.258	23.17	0.296611	-0.42004	normal	normal
1985	37.821	33.93	0.065497	2.282685	normal	ext. wet
1986	37.715	26.69	0.009437	0.464121	normal ext.	normal
1987	42.308	22.76	2.43852	-0.52303	warm	normal
1988	39.786	22.89	1.104719	-0.49037	warm	normal
1989	37.267	26.05	-0.2275	0.303363	normal	normal
1990	38.915	18.79	0.644077	-1.52022	normal	very dry
1991	39.945	28.46	1.188809	0.908714	warm	normal
1992	38.074	25	0.1993	0.039621	normal	normal
1993	36.938	26.54	-0.40149	0.426443	normal	normal
1994	36.757	26.31	-0.49722	0.368671	normal	normal
1995	40.002	26.76	1.218954	0.481703	warm very	normal
1996	34.709	27.67	-1.58034	0.71028	cool	normal
1997	36.44	28.82	-0.66487	0.99914	normal ext.	normal
1998	42.743	24.12	2.668577	-0.18142	warm	normal
1999	40.477	37.93	1.470166	3.287417	warm very	ext. wet
2000	41.077	23.08	1.787486	-0.44265	warm	normal very
2001	38.835	30.97	0.601767	1.539184	normal very	wet
2002	41.066	28.74	1.781668	0.979046	warm	normal
2003	38.352	20.71	0.346325	-1.03795	normal	dry
2004	38.037	27.32	0.179732	0.622366	normal	normal
2005	40.256	27.34	1.353286	0.62739	warm ext.	normal
2006	42.238	24.03	2.4015	-0.20403	warm	normal

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### Water year (Oct-Sep) northeast MN

Year	NE_T	NE_P	NE_Tz	NE_Pz	T_class	P_class
1892	38.574	25.27	0.74501	-0.54346	normal	normal
1893	35.989	25.24	-0.77326	-0.55129	normal	normal
1894	37.768	26.11	0.271616	-0.32447	normal	normal
1895	37.129	31.57	-0.10369	1.098966	normal	wet
1896	36.613	28.18	-0.40676	0.215182	normal	normal very
1897	35.778	33.59	-0.89719	1.625586	normal	wet
1898	36.446	27.54	-0.50484	0.048332	normal very	normal very
1899	33.996	34.61	-1.94382	1.891503	cool	wet
1900	38.497	29.32	0.699785	0.512384	normal	normal
1901	37.435	24.96	0.076032	-0.62428	normal	normal
1902	37.254	25.73	-0.03028	-0.42354	normal	normal
1903	36.336	32.4	-0.56945	1.315349	normal ext.	wet
1904	33.213	27.01	-2.40371	-0.08984	cool	normal
1905	37.651	36.33	0.202897	2.339912	normal	ext. wet
1906	38.636	25.02	0.781425	-0.60864	normal	normal
1907	34.891	27.45	-1.41815	0.024869	cool	normal
1908	38.294	26.03	0.580555	-0.34533	normal	normal
1909	37.112	29.52	-0.11368	0.564524	normal	normal
1910	39.637	23.94	1.36935	-0.8902	warm	normal
1911	38.257	27.38	0.558824	0.00662	normal	normal
1912	35.178	24.03	-1.24959	-0.86674	cool	normal
1913	37.063	24.13	-0.14246	-0.84067	normal	normal
1914	38.854	25.18	0.909464	-0.56693	normal	normal
1915	38.55	22.1	0.730914	-1.36989	normal	dry
1916	37.412	37.3	0.062523	2.592794	normal	ext. wet
1917	35.07	21.66	-1.31302	-1.4846	cool	dry
1918	35.903	18.31	-0.82377	-2.35796	normal very	ext. dry
1919	40.648	24.79	1.963148	-0.6686	warm	normal
1920	35.463	23.37	-1.0822	-1.0388	cool ext.	dry
1921	41.879	25.3	2.68616	-0.53564	warm	normal
1922	37.983	20.81	0.397893	-1.7062	normal	very dry
1923	36.968	23.24	-0.19825	-1.07269	normal	dry
1924	36.278	21.83	-0.60352	-1.44028	normal	dry
1925	36.875	22.96	-0.25288	-1.14569	normal	dry
1926	35.326	25.11	-1.16266	-0.58518	cool	normal
1927	35.186	29.98	-1.24489	0.684448	cool	normal
1928	35.424	30.42	-1.1051	0.799157	cool	normal
1929	36.117	19.42	-0.69808	-2.06858	normal	ext. dry
1930	36.748	25.33	-0.32747	-0.52782	normal very	normal
1931	40.597	24.06	1.933194	-0.85891	warm	normal
1932	39.817	28.45	1.47507	0.285572	warm	normal
1933	37.303	25.39	-0.0015	-0.51218	normal	normal
1934	35.489	22.71	-1.06693	-1.21086	cool	dry
1935	37.348	30.5	0.024934	0.820013	normal	normal
1936	35.529	21.46	-1.04343	-1.53674	cool	very dry
1937	36.903	29.39	-0.23643	0.530633	normal	normal

1938	37.788	26.18	0.283362	-0.30622	normal	normal
1939	36.987	28.37	-0.1871	0.264716	normal	normal
1940	38.318	21.53	0.594651	-1.51849	normal	very dry very
1941	38.985	33.13	0.986405	1.505662	normal	wet
1942	38.987	24.81	0.98758	-0.66339	normal	normal
1943	35.369	28.49	-1.13741	0.296	cool	normal very
1944	38.068	33.91	0.447817	1.709011	normal	wet
1945	37.211	28.82	-0.05553	0.382032	normal	normal
1946	36.963	25.38	-0.20119	-0.51479	normal	normal
1947	36.058	28.15	-0.73273	0.207361	normal	normal
1948	37.991	24.27	0.402592	-0.80417	normal	normal
1949	38.411	26.74	0.649274	-0.16023	normal	normal
1950	34.774	32.59	-1.48687	1.364883	cool	wet
1951	35.71	29.89	-0.93713	0.660984	normal	normal
1952	37.788	26.62	0.283362	-0.19151	normal	normal
1953	38.599	29.43	0.759693	0.541061	normal	normal
1954	38.559	24.6	0.7362	-0.71814	normal	normal
1955	39.555	27.23	1.321188	-0.03249	warm	normal
1956	36.231	22.95	-0.63112	-1.1483	normal	dry
1957	37.425	27.02	0.070159	-0.08723	normal	normal
1958	38.172	22.83	0.5089	-1.17958	normal	dry
1959	36.778	25.05	-0.30985	-0.60082	normal	normal
1960	37.042	22.11	-0.15479	-1.36729	normal	dry
1961	38.538	25.29	0.723866	-0.53825	normal	normal
1962	36.197	26.84	-0.65109	-0.13416	normal	normal
1963	37.271	22.66	-0.02029	-1.2239	normal	dry
1964	38.546	30.07	0.728564	0.707911	normal	normal very
1965	34.054	29.98	-1.90976	0.684448	cool	normal
1966	36.925	27.99	-0.22351	0.165648	normal	normal
1967	35.111	25.74	-1.28894	-0.42093	cool	normal
1968	37.1	30.69	-0.12073	0.869547	normal	normal
1969	37.432	31.15	0.07427	0.98947	normal	normal
1970	36.742	27.01	-0.33099	-0.08984	normal	normal
1971	36.375	31.4	-0.54655	1.054646	normal	wet very
1972	35.508	34.63	-1.05577	1.896717	cool	wet
1973	37.762	27.3	0.268092	-0.01424	normal	normal
1974	36.191	28.73	-0.65462	0.358569	normal	normal
1975	37.674	26.91	0.216406	-0.11591	normal	normal
1976	38.89	22.64	0.930608	-1.22911	normal	dry
1977	36.193	30.31	-0.65344	0.77048	normal	normal
1978	36.602	30.08	-0.41322	0.710518	normal	normal very
1979	34.243	26.82	-1.79875	-0.13937	cool	normal
1980	38.117	24.77	0.476596	-0.67382	normal	normal
1981	38.441	25.1	0.666894	-0.58778	normal	normal
1982	35.821	30.41	-0.87193	0.79655	normal	normal
1983	39.552	30.49	1.319426	0.817406	warm	normal
1984	37.123	25.77	-0.10722	-0.41311	normal	normal
1985	37.057	33.01	-0.14598	1.474378	normal	wet
1986	36.461	31.11	-0.49603	0.979042	normal	normal

					ext.	
1987	40.956	26.22	2.144048	-0.2958	warm	normal
1988	38.326	29.15	0.59935	0.468064	normal	normal
1989	36.035	26.3	-0.74624	-0.27494	normal	normal
1990	37.028	24.61	-0.16301	-0.71553	normal	normal
1991	38.317	31.57	0.594064	1.098966	normal	wet
1992	36.786	31.05	-0.30515	0.9634	normal	normal
1993	36.147	29.51	-0.68046	0.561917	normal	normal
1994	35.653	28.68	-0.9706	0.345534	normal	normal
1995	38.783	27.22	0.867763	-0.03509	normal	normal
					ext.	
1996	33.804	35.03	-2.05659	2.000998	cool	ext. wet
1997	35.789	28.47	-0.89073	0.290786	normal	normal
					ext.	
1998	42.097	25.04	2.8142	-0.60343	warm	normal
					very	
1999	39.959	39.36	1.558472	3.129843	warm	ext. wet
2000	39.75	24.82	1.435719	-0.66078	warm	normal
						very
2001	38.125	34.14	0.481295	1.768973	normal	wet
					very	
2002	40.441	27.7	1.841569	0.090045	warm	normal
2003	37.303	24.57	-0.0015	-0.72596	normal	normal
2004	37.302	26.45	-0.00208	-0.23583	normal	normal
2005	39.116	26.97	1.063347	-0.10027	warm	normal
					ext.	
2006	41.309	27.49	2.351378	0.035297	warm	normal

### Water year (Oct-Sep) west-central MN

Year	WC_T	WC_P	WC_Tz	WC_Pz	T_class	P_class
1892	40.278	27.78	-0.861	0.864759	normal ext.	normal
1893	37.902	22.8	-2.08539	-0.3184	cool	normal
1894	41.037	16.92	-0.46987	-1.71539	normal	very dry
1895	40.405	20.69	-0.79555	-0.8197	normal	normal
1896	40.356	28.91	-0.8208	1.133228	normal	wet
1897	39.088	27.72	-1.47423	0.850504	cool	normal
1898	42.427	19.96	0.246421	-0.99314	normal very	normal
1899	38.412	27.57	-1.82258	0.814867	cool	normal
1900	43.316	24.53	0.704539	0.092616	normal	normal
1901	42.765	21.45	0.420598	-0.63914	normal	normal
1902	41.691	20.32	-0.13285	-0.90761	normal	normal
1903	40.007	28.84	-1.00065	1.116597	cool very	wet
1904	38.1	23.67	-1.98336	-0.11171	cool	normal
1905	41.541	28.17	-0.21015	0.957417	normal	normal very
1906	42.402	31.31	0.233538	1.703426	normal very	wet
1907	38.672	21.62	-1.6886	-0.59875	cool	normal
1908	43.172	26.58	0.630333	0.57966	normal	normal
1909	41.474	23.26	-0.24468	-0.20911	normal	normal
1910	42.179	17.6	0.118622	-1.55383	normal	very dry
1911	42.037	23	0.045447	-0.27089	normal very	normal
1912	38.608	27.57	-1.72158	0.814867	cool	normal
1913	42.049	23.13	0.05163	-0.24	normal	normal
1914	42.81	28.02	0.443788	0.921779	normal	normal
1915	41.328	28.11	-0.31991	0.943162	normal	normal very
1916	40.293	31.98	-0.85327	1.862606	normal very	wet
1917	38.361	18.85	-1.84886	-1.25685	cool	dry
1918	40.197	18.21	-0.90274	-1.40891	normal	dry
1919	43.953	26.72	1.032797	0.612922	warm very	normal
1920	38.988	28.74	-1.52576	1.092839	cool very	wet
1921	45.53	23.53	1.845454	-0.14497	warm	normal
1922	42.251	17.01	0.155725	-1.69401	normal	very dry
1923	42.001	22.91	0.026895	-0.29227	normal	normal
1924	41.547	22.97	-0.20706	-0.27801	normal	normal
1925	42.607	21.68	0.339178	-0.58449	normal	normal
1926	41.076	20.45	-0.44977	-0.87672	normal	normal
1927	40.953	21.79	-0.51316	-0.55836	normal	normal
1928	40.715	22.87	-0.6358	-0.30177	normal	normal
1929	41.029	19.91	-0.47399	-1.00502	normal	dry
1930	42.474	20.26	0.270641	-0.92186	normal ext.	normal
1931	46.192	18.85	2.186594	-1.25685	warm	dry
1932	43.815	20.33	0.961683	-0.90523	normal	normal
1933	43.074	18.08	0.579832	-1.43979	normal	dry

1934	43.109	14.54	0.597868	-2.28083	normal	ext. dry
1935	43.371	23.66	0.732881	-0.11408	normal	normal
1936	39.538	14.39	-1.24233	-2.31647	cool	ext. dry
1937	40.627	26.02	-0.68115	0.446614	normal	normal
1938	42.555	23.47	0.312382	-0.15922	normal	normal
1939	43.286	19.98	0.689079	-0.98838	normal	normal
1940	42.87	20.25	0.474707	-0.92424	normal	normal
1941	43.904	28.14	1.007546	0.950289	warm	normal
1942	44.006	30.44	1.060108	1.496729	warm	wet
1943	40.282	24.78	-0.85894	0.152012	normal	normal
1944	43.368	28.18	0.731335	0.959792	normal	normal
1945	42.427	22.08	0.246421	-0.48946	normal	normal
1946	42.121	25.12	0.088733	0.23279	normal	normal
1947	42.053	24.31	0.053692	0.040348	normal	normal
1948	41.839	24.75	-0.05659	0.144884	normal	normal
1949	42.376	21.37	0.22014	-0.65815	normal	normal
1950	39.798	23.4	-1.10835	-0.17585	cool	normal
					very	
1951	38.9	26.41	-1.57111	0.539271	cool	normal
1952	41.119	25.77	-0.42762	0.387218	normal	normal
1953	42.798	26.81	0.437604	0.634304	normal	normal
1954	43.003	24.22	0.543244	0.018965	normal	normal
1955	44.042	23.27	1.07866	-0.20674	warm	normal
1956	39.195	22.5	-1.41909	-0.38968	cool	normal
						very
1957	42.632	31.7	0.352061	1.796083	normal	wet
1958	43.238	19.51	0.664344	-1.10005	normal	dry
1959	42.95	21.74	0.515932	-0.57024	normal	normal
1960	41.066	25.35	-0.45493	0.287434	normal	normal
1961	43.211	20.58	0.65043	-0.84584	normal	normal
						very
1962	40.343	31.16	-0.8275	1.667788	normal	wet
1963	43.557	24.07	0.828731	-0.01667	normal	normal
1964	43.863	22.8	0.986418	-0.3184	normal	normal
						very
1965	38.661	31.27	-1.69427	1.693923	cool	wet
1966	41.502	22.7	-0.23025	-0.34216	normal	normal
1967	40.137	20.28	-0.93366	-0.91711	normal	normal
1968	42.358	22.79	0.210864	-0.32078	normal	normal
1969	40.553	25.53	-0.71929	0.330198	normal	normal
1970	40.917	21.94	-0.53171	-0.52272	normal	normal
1971	40.766	27.33	-0.60952	0.757847	normal	normal
						very
1972	40.257	30.64	-0.87182	1.544245	normal	wet
1973	42.49	22.27	0.278886	-0.44432	normal	normal
1974	41.265	21.22	-0.35238	-0.69378	normal	normal
1975	41.821	25.56	-0.06586	0.337326	normal	normal
1976	44.683	13.51	1.408979	-2.52554	warm	ext. dry
1977	41.774	27.57	-0.09008	0.814867	normal	normal
1978	40.458	27.91	-0.76824	0.895645	normal	normal
						ext.
1979	37.993	23.5	-2.0385	-0.15209	cool	normal
1980	42.781	22.17	0.428843	-0.46808	normal	normal
1981	44.188	21.08	1.153896	-0.72704	warm	normal

1982	40.254	25.43	-0.87337	0.30644	normal	normal
1983	44.259	25.19	1.190484	0.24942	warm	normal
1984	41.489	26.37	-0.23695	0.529768	normal	normal very
1985	42.247	32.39	0.153663	1.960015	normal	wet
1986	40.894	33.89	-0.54356	2.316389	normal ext.	ext. wet
1987	46.707	17.57	2.451983	-1.56096	warm	very dry
1988	44.558	18.62	1.344564	-1.3115	warm	dry
1989	41.472	23.58	-0.24571	-0.13309	normal	normal
1990	43.488	22.66	0.793174	-0.35166	normal	normal very
1991	44.269	31.36	1.195637	1.715305	warm	wet
1992	42.68	20.96	0.376796	-0.75555	normal	normal very
1993	39.978	30.56	-1.01559	1.525239	cool	wet
1994	40.709	23.32	-0.6389	-0.19486	normal	normal
1995	43.745	29.88	0.92561	1.363683	normal	wet
1996	39.793	21.98	-1.11093	-0.51322	cool	normal
1997	40.506	27.36	-0.74351	0.764975	normal ext.	normal
1998	46.282	23.77	2.232973	-0.08795	warm very	normal very
1999	45.599	31.03	1.881011	1.636903	warm ext.	wet
2000	45.952	19.93	2.062918	-1.00026	warm	dry
2001	41.638	29.95	-0.16017	1.380314	normal very	wet
2002	45.468	24.43	1.813504	0.068858	warm	normal
2003	42.682	21.14	0.377827	-0.71279	normal	normal
2004	42.596	27.07	0.33351	0.696076	normal	normal
2005	44.624	29.18	1.378575	1.197375	warm very	wet
2006	45.061	25.79	1.603769	0.39197	warm	normal

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### Water year (Oct-Sep) central MN

Year	C_T	C_P	C_Tz	C_Pz	T_class	P_class
1892	40.838	32.46	-0.80355	1.218375	normal very	wet
1893	39.122	22.07	-1.72866	-0.96974	cool	normal
1894	42.27	20.86	-0.03154	-1.22456	normal	dry
1895	41.446	22.94	-0.47577	-0.78652	normal	normal
1896	41.518	25.67	-0.43695	-0.21159	normal	normal
1897	39.684	32.87	-1.42568	1.30472	cool	wet
1898	42.681	20.3	0.190028	-1.3425	normal very	dry
1899	38.963	27.12	-1.81437	0.09378	cool	normal
1900	43.949	28.99	0.873617	0.487599	normal	normal
1901	43.143	21.99	0.439096	-0.98659	normal	normal
1902	41.971	22.67	-0.19274	-0.84338	normal	normal
1903	40.752	33.68	-0.84991	1.475305	normal ext.	wet
1904	38.139	25.39	-2.2586	-0.27055	cool	normal
1905	41.419	31.79	-0.49033	1.077274	normal	wet
1906	42.651	32.94	0.173855	1.319462	normal very	wet
1907	39.495	24.79	-1.52757	-0.39691	cool	normal
1908	43.697	28.37	0.737762	0.357028	normal	normal
1909	41.988	24.66	-0.18357	-0.42429	normal	normal
1910	43.114	16.59	0.423462	-2.12382	normal	ext. dry
1911	43.164	24.07	0.450417	-0.54854	normal very	normal
1912	39.169	29.14	-1.70332	0.519189	cool	normal
1913	42.889	26.61	0.302163	-0.01362	normal	normal
1914	43.886	28.66	0.839653	0.418102	normal	normal
1915	42.252	26.48	-0.04125	-0.041	normal	normal
1916	41.056	32.73	-0.68602	1.275237	normal very	wet
1917	38.882	22.45	-1.85804	-0.88971	cool	normal
1918	40.773	19.23	-0.83859	-1.56784	normal	very dry
1919	44.559	28.94	1.202473	0.477069	warm	normal
1920	39.863	27.67	-1.32918	0.209609	cool ext.	normal
1921	46.172	24.33	2.072053	-0.49379	warm	normal
1922	42.375	17.5	0.025061	-1.93217	normal	very dry
1923	42.582	22.6	0.136657	-0.85812	normal	normal
1924	41.943	25.47	-0.20783	-0.25371	normal	normal
1925	43.244	21.71	0.493546	-1.04556	normal	dry
1926	41.418	24.95	-0.49086	-0.36322	normal	normal
1927	41.241	23.02	-0.58629	-0.76967	normal	normal
1928	41.193	26.8	-0.61216	0.026389	normal	normal
1929	41.668	21.45	-0.35609	-1.10031	normal	dry
1930	43.291	21.97	0.518884	-0.9908	normal ext.	normal
1931	46.506	19.25	2.252115	-1.56363	warm	very dry
1932	44.574	24.07	1.210559	-0.54854	warm	normal
1933	43.518	20.43	0.641261	-1.31512	normal	dry
1934	43.182	17.61	0.460121	-1.90901	normal	very dry
1935	43.471	27.42	0.615923	0.15696	normal	normal

1936	40.032	19.29	-1.23807	-1.5552	cool	very dry
1937	41.042	27.32	-0.69357	0.1359	normal	normal
1938	42.75	28.97	0.227227	0.483387	normal	normal
1939	43.397	24.89	0.576029	-0.37585	normal	normal
1940	42.864	22.18	0.288685	-0.94658	normal	normal
1941	43.736	32.43	0.758787	1.212057	normal	wet
1942	43.948	32.26	0.873078	1.176255	normal	wet
1943	40.3	25.19	-1.09359	-0.31267	cool	normal
1944	42.843	32.04	0.277364	1.129924	normal	wet
1945	41.844	26.8	-0.2612	0.026389	normal	normal
1946	42.176	25.74	-0.08222	-0.19685	normal	normal
1947	42.237	26.18	-0.04934	-0.10418	normal	normal
1948	42.096	23.92	-0.12535	-0.58013	normal	normal
1949	42.75	23.25	0.227227	-0.72123	normal	normal
1950	40.209	23.74	-1.14265	-0.61804	cool	normal
					very	
1951	39.245	33.79	-1.66235	1.498471	cool	wet
1952	41.57	30.3	-0.40892	0.763483	normal	normal
1953	42.898	30	0.307015	0.700303	normal	normal
1954	43.569	27.8	0.668756	0.236987	normal	normal
1955	44.148	24.88	0.980899	-0.37796	normal	normal
1956	39.72	26.57	-1.40627	-0.02205	cool	normal
						very
1957	42.866	34.5	0.289763	1.647995	normal	wet
1958	43.072	20.45	0.400819	-1.31091	normal	dry
1959	43.23	23.6	0.485998	-0.64753	normal	normal
1960	41.097	25.16	-0.66392	-0.31899	normal	normal
1961	43.247	21.91	0.495163	-1.00344	normal	dry
1962	40.756	31.07	-0.84775	0.925643	normal	normal
1963	43.537	25.86	0.651505	-0.17157	normal	normal
1964	44.255	24.77	1.038584	-0.40113	warm	normal
					very	very
1965	39.071	35.18	-1.75615	1.791202	cool	wet
1966	41.952	25.06	-0.20298	-0.34005	normal	normal
1967	40.315	22.89	-1.0855	-0.79705	cool	normal
1968	42.852	28.12	0.282216	0.304379	normal	normal
1969	41.475	26.97	-0.46014	0.062191	normal	normal
1970	41.202	23.8	-0.60731	-0.60541	normal	normal
1971	40.979	31.34	-0.72753	0.982505	normal	normal
						very
1972	40.597	36.01	-0.93347	1.965999	normal	wet
1973	42.796	26.46	0.252026	-0.04521	normal	normal
1974	41.824	23.88	-0.27199	-0.58856	normal	normal
1975	41.94	27.64	-0.20945	0.203291	normal	normal
1976	44.401	18.13	1.117294	-1.7995	warm	very dry
1977	41.935	29.29	-0.21215	0.550779	normal	normal
1978	41.046	33	-0.69141	1.332098	normal	wet
					very	
1979	38.799	26.92	-1.90279	0.051661	cool	normal
1980	42.929	26.45	0.323727	-0.04732	normal	normal
1981	44.188	24.36	1.002464	-0.48747	warm	normal
1982	40.757	29.47	-0.84721	0.588686	normal	normal
1983	44.477	32.59	1.158266	1.245753	warm	wet
1984	41.602	31.66	-0.39167	1.049896	normal	wet

1985	42.776	36.96	0.241244	2.166067	normal	ext. wet
1986	41.355	38.55	-0.52483	2.500918	normal	ext. wet
					ext.	
1987	46.96	19.44	2.49687	-1.52361	warm	very dry
1988	44.602	19.13	1.225654	-1.5889	warm	very dry
1989	41.611	24.51	-0.38682	-0.45588	normal	normal
1990	43.563	29.36	0.665521	0.56552	normal	normal
						very
1991	44.28	35.32	1.052062	1.820686	warm	wet
1992	42.276	24.33	-0.02831	-0.49379	normal	normal
						very
1993	40.505	33.95	-0.98307	1.532166	normal	wet
1994	40.903	27.79	-0.7685	0.234881	normal	normal
1995	43.749	30.38	0.765795	0.780331	normal	normal
1996	39.694	22.95	-1.42029	-0.78441	cool	normal
1997	40.905	31.27	-0.76743	0.967763	normal	normal
						ext.
1998	46.527	26.56	2.263436	-0.02415	warm	normal
						very
1999	45.563	31.71	1.743737	1.060426	warm	wet
						ext.
2000	46.053	20.28	2.007899	-1.34671	warm	dry
2001	42.281	31.08	-0.02561	0.927749	normal	normal
						very
2002	45.838	35.4	1.891991	1.837534	warm	wet
2003	43.153	25.38	0.444487	-0.27266	normal	normal
2004	43.472	29.11	0.616463	0.512871	normal	normal
						very
2005	45.492	31.56	1.70546	1.028837	warm	wet
						very
2006	45.939	27.78	1.946441	0.232775	warm	normal

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## Water year (Oct-Sep) east-central MN

Year	EC_T	EC_P	EC_Tz	EC_Pz	T_class	P_class
1892	40.522	31.1	-0.13878	0.64991	normal	normal
1893	38.74	23.28	-1.14031	-1.01088	cool	dry
1894	41.587	22.98	0.459782	-1.07459	normal	dry
1895	40.836	26.53	0.0377	-0.32065	normal	normal
1896	40.579	25.47	-0.10674	-0.54577	normal	normal very
1897	39.938	36.72	-0.467	1.843467	normal	wet
1898	42.079	22.27	0.736299	-1.22538	normal	dry
1899	38.168	32.31	-1.46179	0.906886	cool very	normal
1900	43.617	28.99	1.600696	0.201795	warm	normal
1901	42.183	25.03	0.79475	-0.63922	normal	normal
1902	41.685	26.65	0.51486	-0.29517	normal	normal
1903	40.241	39.45	-0.29671	2.423255	normal very	ext. wet
1904	37.423	27.1	-1.8805	-0.1996	cool	normal
1905	41.303	33.87	0.300166	1.238193	normal	wet
1906	41.641	32.21	0.490131	0.885648	normal	normal
1907	38.572	27.71	-1.23473	-0.07005	cool	normal
1908	42.442	29.48	0.940315	0.305859	normal	normal
1909	40.501	26.66	-0.15058	-0.29304	normal	normal
1910	41.563	18.56	0.446293	-2.01329	normal	ext. dry
1911	40.774	25.89	0.002854	-0.45657	normal ext.	normal
1912	36.732	26.42	-2.26886	-0.34401	cool	normal
1913	40.087	26.75	-0.38326	-0.27393	normal	normal
1914	41.477	29.94	0.397959	0.403553	normal	normal
1915	40.467	24.37	-0.16969	-0.77939	normal	normal
1916	39.099	33.46	-0.93854	1.151119	normal ext.	wet
1917	36.255	20.46	-2.53694	-1.60978	cool	very dry
1918	38.308	19.24	-1.3831	-1.86888	cool	very dry
1919	42.196	28.58	0.802056	0.11472	normal very	normal
1920	37.501	29.6	-1.83666	0.331345	cool very	normal
1921	44.046	25.34	1.841806	-0.57338	warm	normal
1922	40.49	22.52	-0.15676	-1.17228	normal	dry
1923	40.248	24.27	-0.29277	-0.80062	normal	normal
1924	39.862	26.94	-0.50971	-0.23358	normal	normal
1925	40.968	21.9	0.111887	-1.30396	normal	dry
1926	38.837	23.2	-1.08579	-1.02787	cool	dry
1927	39.028	25.99	-0.97844	-0.43534	normal	normal
1928	38.7	28.51	-1.16279	0.099854	cool	normal
1929	39.98	21.22	-0.4434	-1.44837	normal	dry
1930	41.401	21.6	0.355245	-1.36767	normal ext.	dry
1931	44.623	24	2.166095	-0.85797	warm	normal
1932	43.357	23.13	1.454569	-1.04273	warm	dry
1933	41.449	23.23	0.382222	-1.0215	normal	dry
1934	40.463	21.52	-0.17194	-1.38466	normal	dry
1935	40.887	30.19	0.066363	0.456647	normal	normal

1936	38.311	20.46	-1.38142	-1.60978	cool	very dry
1937	39.226	27.07	-0.86716	-0.20597	normal	normal
1938	41.213	32.39	0.249584	0.923876	normal	normal
1939	41.149	24.79	0.213614	-0.69019	normal	normal
1940	41.109	22.16	0.191133	-1.24874	normal	dry
1941	42.317	34.98	0.870061	1.473931	normal	wet
1942	42.603	31.09	1.030801	0.647786	warm	normal
1943	38.962	27.33	-1.01554	-0.15075	cool	normal very
1944	41.323	35.3	0.311407	1.541892	normal	wet
1945	40.419	29.85	-0.19667	0.384439	normal	normal
1946	40.75	25.88	-0.01063	-0.4587	normal	normal
1947	40.602	26.13	-0.09381	-0.4056	normal	normal
1948	40.904	23.07	0.075918	-1.05548	normal	dry
1949	41.185	26.42	0.233847	-0.34401	normal	normal
1950	38.494	27.57	-1.27857	-0.09978	cool	normal very
1951	38.159	35.33	-1.46685	1.548263	cool	wet
1952	40.393	33.28	-0.21128	1.112891	normal	wet
1953	41.27	32.83	0.281619	1.017321	normal	wet
1954	41.832	31.47	0.597478	0.728489	normal	normal
1955	42.358	28.37	0.893104	0.070121	normal	normal
1956	38.192	24.01	-1.4483	-0.85584	cool	normal
1957	40.868	31.19	0.055685	0.669024	normal	normal
1958	41.361	23.24	0.332764	-1.01937	normal	dry
1959	41.056	24.68	0.161346	-0.71355	normal	normal
1960	39.959	24.51	-0.4552	-0.74965	normal	normal
1961	41.983	21.84	0.682344	-1.3167	normal	dry
1962	39.623	30.88	-0.64404	0.603187	normal	normal
1963	41.434	24.5	0.373792	-0.75178	normal	normal
1964	42.502	28.46	0.974036	0.089235	normal	normal very
1965	37.58	33.91	-1.79226	1.246688	cool	wet
1966	40.438	28.58	-0.18599	0.11472	normal	normal
1967	38.842	24.1	-1.08298	-0.83673	cool	normal
1968	40.996	31.68	0.127624	0.773088	normal	normal
1969	40.489	26.97	-0.15732	-0.22721	normal	normal
1970	39.898	24.51	-0.48948	-0.74965	normal	normal
1971	39.336	32.18	-0.80534	0.879277	normal	normal
1972	38.995	38.84	-0.99699	2.293706	normal	ext. wet
1973	41.054	28.4	0.160222	0.076493	normal	normal
1974	40.143	28.36	-0.35178	0.067997	normal	normal
1975	40.617	32.12	-0.08538	0.866534	normal	normal
1976	42.456	20.78	0.948183	-1.54182	normal	very dry
1977	39.892	30.95	-0.49285	0.618053	normal	normal
1978	39.865	34.76	-0.50803	1.427209	normal	wet very
1979	37.523	27.06	-1.82429	-0.20809	cool	normal
1980	41.011	26.21	0.136054	-0.38861	normal	normal
1981	41.877	26.08	0.62277	-0.41622	normal	normal
1982	39.077	28.4	-0.95091	0.076493	normal	normal
1983	42.792	33.28	1.137024	1.112891	warm	wet
1984	40.358	30.94	-0.23095	0.615929	normal	normal

1985	40.849	36.59	0.045006	1.815858	normal	very wet
1986	39.976	40.02	-0.44564	2.54431	normal	ext. wet
1987	45.048	19.86	2.404956	-1.7372	warm	very dry
1988	42.417	23.42	0.926264	-0.98114	normal	normal
1989	40.107	26.81	-0.37202	-0.26119	normal	normal
1990	41.88	29.73	0.624456	0.358954	normal	normal very
1991	42.77	35.45	1.124659	1.573748	warm	wet
1992	40.948	27.17	0.100647	-0.18473	normal	normal
1993	39.965	31.28	-0.45183	0.688138	normal	normal
1994	39.892	29.22	-0.49285	0.250641	normal	normal
1995	42.677	32.88	1.072391	1.02794	warm	wet
1996	38.418	27.56	-1.32128	-0.1019	cool	normal
1997	39.557	31.69	-0.68113	0.775212	normal	normal ext.
1998	45.078	26.81	2.421817	-0.26119	warm	normal
1999	44.145	35.77	1.897446	1.641709	warm	very very wet
2000	44.12	22.93	1.883396	-1.08521	warm	dry
2001	41.44	34.98	0.377164	1.473931	normal	wet
2002	44.144	37.12	1.896884	1.928418	warm	very wet
2003	41.46	27.26	0.388404	-0.16562	normal	normal
2004	41.643	28.31	0.491255	0.057379	normal	normal
2005	43.437	30.21	1.499531	0.460894	warm	normal
2006	44.804	27.68	2.267822	-0.07642	warm	ext. normal

### Water year (Oct-Sep) southwest MN

Year	SW_T	SW_P	SW_Tz	SW_Pz	T_class	P_class
1892	41.885	34.78	-1.25513	1.825312	cool very	very wet
1893	40.984	20.45	-1.74248	-1.19649	cool	dry
1894	44.615	16.51	0.22154	-2.02733	normal	ext. dry
1895	44.058	23.73	-0.07974	-0.50483	normal	normal
1896	43.308	29.25	-0.48542	0.659187	normal	normal
1897	41.498	28.9	-1.46446	0.585382	cool	normal
1898	44.325	21.71	0.064678	-0.93079	normal ext.	normal
1899	39.753	25.29	-2.40834	-0.17587	cool	normal
1900	45.225	29.16	0.551492	0.640209	normal	normal
1901	45.14	23.16	0.505515	-0.62503	normal	normal
1902	43.208	24.63	-0.53951	-0.31504	normal	normal
1903	42.477	38.49	-0.93491	2.607649	normal very	ext. wet
1904	40.508	24	-1.99995	-0.44789	cool	normal
1905	44.116	32.74	-0.04837	1.395132	normal	wet
1906	44.785	27.61	0.313494	0.313357	normal	normal
1907	42.33	25.78	-1.01443	-0.07254	cool	normal
1908	45.218	30.12	0.547706	0.842646	normal	normal
1909	43.757	28.2	-0.24256	0.437771	normal	normal
1910	44.197	19.83	-0.00456	-1.32723	normal	dry
1911	44.87	21.2	0.359471	-1.03834	normal ext.	dry
1912	40.273	25.46	-2.12707	-0.14002	cool	normal
1913	44.453	25.27	0.133914	-0.18009	normal	normal
1914	45.599	30.01	0.75379	0.81945	normal	normal
1915	43.333	29.3	-0.4719	0.669731	normal	normal
1916	43.089	25.1	-0.60388	-0.21593	normal ext.	normal
1917	40.36	27.1	-2.08001	0.205812	cool	normal
1918	42.392	23.32	-0.98089	-0.59129	normal	normal very
1919	45.991	34.36	0.965825	1.736746	normal	wet
1920	41.672	30.88	-1.37034	1.00291	cool ext.	wet
1921	48.067	26.21	2.088742	0.018135	warm	normal
1922	44.787	15.09	0.314576	-2.32677	normal	ext. dry
1923	44.644	26.05	0.237227	-0.0156	normal	normal
1924	43.746	22.6	-0.24851	-0.74311	normal	normal
1925	45.277	21.38	0.579619	-1.00038	normal	dry
1926	43.937	21.72	-0.14519	-0.92868	normal	normal
1927	43.813	26.59	-0.21226	0.098267	normal	normal
1928	43.688	24.79	-0.27988	-0.2813	normal	normal
1929	43.209	27.68	-0.53897	0.328118	normal	normal
1930	45.166	22.61	0.519579	-0.74101	normal ext.	normal
1931	49.108	17.85	2.651824	-1.74476	warm	very dry
1932	46.327	26.13	1.147569	0.001265	warm	normal
1933	45.741	21.97	0.830599	-0.87596	normal	normal
1934	46.201	19.91	1.079415	-1.31036	warm	dry

1935	46.07	23.18	1.008556	-0.62081	warm	normal
1936	42.334	20.52	-1.01226	-1.18173	cool	dry
1937	43.352	24.55	-0.46162	-0.33191	normal	normal
1938	44.796	30.31	0.319444	0.882712	normal	normal
1939	46.461	22.96	1.22005	-0.6672	warm	normal
1940	45.127	20.55	0.498483	-1.1754	normal	dry
1941	46.433	26.43	1.204904	0.064527	warm	normal
1942	46.027	32.94	0.985297	1.437307	normal	wet
1943	42.962	28.69	-0.67257	0.541099	normal	normal
1944	44.989	30.94	0.423839	1.015562	normal	wet
1945	44.473	25.39	0.144732	-0.15478	normal	normal
1946	44.765	25.54	0.302676	-0.12315	normal	normal
1947	44.301	25.12	0.051696	-0.21172	normal	normal
1948	44.824	25.85	0.334589	-0.05778	normal	normal
1949	44.486	23.55	0.151764	-0.54279	normal	normal
1950	42.305	20.41	-1.02795	-1.20493	cool	dry
					very	
1951	41.238	30.51	-1.60509	0.924887	cool	normal
1952	43.468	22	-0.39888	-0.86964	normal	normal
1953	44.704	29.05	0.269681	0.617013	normal	normal
1954	45.813	24.44	0.869544	-0.35511	normal	normal
1955	46.427	18.8	1.201659	-1.54443	warm	very dry
1956	41.8	22.21	-1.30111	-0.82535	cool	normal
1957	44.668	29.87	0.250208	0.789928	normal	normal
1958	45.029	19.39	0.445475	-1.42002	normal	dry
1959	44.943	22.26	0.398957	-0.81481	normal	normal
1960	42.433	32.39	-0.95871	1.321327	normal	wet
1961	44.543	22.78	0.182595	-0.70516	normal	normal
1962	42.558	30.16	-0.8911	0.851081	normal	normal
1963	45.639	26.7	0.775426	0.121463	normal	normal
1964	46.167	25.43	1.061024	-0.14635	warm	normal
					very	
1965	41.326	29.71	-1.55749	0.756189	cool	normal
1966	44.209	22.02	0.001933	-0.86542	normal	normal
1967	43.023	21.66	-0.63958	-0.94133	normal	normal
1968	44.817	28.84	0.330803	0.57273	normal	normal
1969	42.577	30.96	-0.88082	1.019779	normal	wet
1970	43.032	25.11	-0.63471	-0.21382	normal	normal
1971	43.118	25.2	-0.58819	-0.19485	normal	normal
1972	42.697	29.34	-0.81591	0.678166	normal	normal
1973	44.959	23.42	0.407611	-0.5702	normal	normal
1974	44.389	21.33	0.099296	-1.01092	normal	dry
1975	43.857	22.89	-0.18847	-0.68196	normal	normal
1976	46.493	17.59	1.237359	-1.79959	warm	very dry
1977	44.29	29.56	0.045746	0.724558	normal	normal
1978	42.58	28.4	-0.8792	0.479946	normal	normal
					ext.	
1979	40.033	33.19	-2.25688	1.490025	cool	wet
1980	45.411	24.55	0.6521	-0.33191	normal	normal
1981	46.637	21.21	1.315249	-1.03623	warm	dry
1982	42.725	28	-0.80077	0.395597	normal	normal
1983	45.742	31.79	0.83114	1.194803	normal	wet
1984	42.755	32.3	-0.78454	1.302348	normal	wet



1985	44.51	34.04	0.164745	1.669267	normal	very wet
1986	42.646	35.81	-0.8435	2.042511	normal	ext. wet
1987	48.202	21.56	2.161764	-0.96242	warm	ext. normal
1988	45.698	20.36	0.80734	-1.21547	normal	dry
1989	44.097	21.33	-0.05865	-1.01092	normal	dry
1990	45.535	23.8	0.719172	-0.49007	normal	normal
1991	45.881	31.83	0.906325	1.203238	normal	wet
1992	44.14	28.16	-0.03539	0.429336	normal	normal
1993	41.747	43.12	-1.32977	3.583989	cool	ext. wet
1994	42.806	28.87	-0.75696	0.579056	normal	normal
1995	45.404	31.83	0.648314	1.203238	normal	wet
1996	41.928	25	-1.23187	-0.23702	cool	normal
1997	41.928	27.78	-1.23187	0.349205	cool	normal
1998	46.989	23.2	1.505647	-0.61659	warm	very normal
1999	46.852	27.36	1.431543	0.260638	warm	normal
2000	47.656	22.11	1.86643	-0.84644	warm	very normal
2001	42.983	31.08	-0.66122	1.045084	normal	wet
2002	47.019	26.14	1.521874	0.003374	warm	very normal
2003	44.032	23.9	-0.09381	-0.46898	normal	normal
2004	44.738	30.09	0.288072	0.83632	normal	normal
2005	47.183	32.04	1.610583	1.247522	warm	very wet
2006	46.715	27.94	1.357439	0.382944	warm	normal

### Water year (Oct-Sep) south-central MN

Year	SC_T	SW-P	SC_Tz	SC_Pz	T_class	P_class
1892	41.943	36.45	-1.45187	1.597939	cool ext.	very wet
1893	40.338	24.89	-2.35048	-0.97046	cool	normal
1894	44.906	21.92	0.207059	-1.63034	normal	very dry
1895	43.972	26.16	-0.31587	-0.68829	normal	normal
1896	44.487	24.79	-0.02753	-0.99268	normal	normal
1897	42.613	29.8	-1.07675	0.120441	cool	normal
1898	45.153	21.4	0.345349	-1.74587	normal very	very dry
1899	41.436	31.01	-1.73573	0.389279	cool	normal
1900	46.442	29.55	1.067036	0.064896	warm	normal
1901	45.947	27.35	0.789895	-0.4239	normal	normal
1902	44.092	31.98	-0.24868	0.604794	normal	normal very
1903	43.772	38.06	-0.42785	1.95565	normal very	wet
1904	40.984	24.26	-1.9888	-1.11044	cool	dry
1905	44.053	32.39	-0.27052	0.695888	normal	normal
1906	45.718	34.47	0.661682	1.158023	normal	wet
1907	42.28	28.65	-1.26319	-0.13507	cool	normal
1908	46.123	33.83	0.888434	1.015827	normal	wet
1909	44.265	32.08	-0.15183	0.627012	normal	normal
1910	44.867	21.08	0.185223	-1.81697	normal	very dry
1911	45.831	24.31	0.724949	-1.09933	normal very	dry
1912	41.105	30.27	-1.92105	0.224866	cool	normal
1913	45.211	28	0.377823	-0.27948	normal	normal
1914	46.411	30.35	1.04968	0.24264	warm	normal
1915	44.045	31.64	-0.275	0.529253	normal	normal
1916	43.872	31.49	-0.37186	0.495926	normal very	normal
1917	41.052	29.88	-1.95072	0.138215	cool	normal
1918	42.751	30.05	-0.99949	0.175986	normal	normal
1919	46.629	34.88	1.171734	1.249116	warm	wet
1920	42.147	26.25	-1.33765	-0.6683	cool ext.	normal
1921	48.401	27.33	2.163844	-0.42834	warm	normal
1922	44.905	19.79	0.206499	-2.10358	normal	ext. dry
1923	44.852	27.49	0.176825	-0.3928	normal	normal
1924	43.572	27.82	-0.53982	-0.31948	normal	normal
1925	45.172	26.67	0.355987	-0.57498	normal	normal
1926	43.56	25.42	-0.54654	-0.85271	normal	normal
1927	43.585	28.23	-0.53254	-0.22838	normal	normal
1928	43.722	29.08	-0.45584	-0.03953	normal	normal
1929	43.188	27.56	-0.75482	-0.37724	normal	normal
1930	44.828	26.98	0.163388	-0.50611	normal ext.	normal
1931	48.386	20.76	2.155446	-1.88807	warm	very dry
1932	46.368	30.96	1.025605	0.37817	warm	normal
1933	45.689	24.02	0.645446	-1.16376	normal	dry
1934	46.387	19.64	1.036243	-2.13691	warm	ext. dry

1935	45.42	29.61	0.494838	0.078227	normal	normal
1936	42.308	24.75	-1.24751	-1.00157	cool	dry
1937	43.565	26.7	-0.54374	-0.56832	normal	normal
1938	45.214	32.94	0.379502	0.818087	normal	normal
1939	46.632	22.79	1.173414	-1.43704	warm	dry
1940	44.936	25.19	0.223855	-0.90381	normal	normal
1941	46.287	32.17	0.980255	0.647008	normal	normal
1942	46.426	34.5	1.058078	1.164688	warm	wet
1943	42.876	32.13	-0.9295	0.638121	normal	normal
1944	45.112	32.99	0.322394	0.829196	normal	normal
1945	44.476	32.4	-0.03369	0.69811	normal	normal
1946	45.239	28.98	0.393499	-0.06175	normal	normal
1947	44.943	30.82	0.227774	0.347065	normal	normal
1948	45.144	27.73	0.34031	-0.33947	normal	normal
1949	45.505	25.99	0.542428	-0.72607	normal	normal
1950	43.101	24.66	-0.80353	-1.02157	normal	dry
					very	very
1951	41.485	36.69	-1.7083	1.651263	cool	wet
1952	44.255	27.24	-0.15742	-0.44834	normal	normal
1953	45.221	29.23	0.383421	-0.0062	normal	normal
1954	46.829	28.63	1.283711	-0.13951	warm	normal
1955	46.687	22.43	1.204207	-1.51703	warm	very dry
1956	42.23	27.46	-1.29118	-0.39946	cool	normal
1957	45.568	28.16	0.5777	-0.24393	normal	normal
1958	45.272	20.95	0.411975	-1.84585	normal	very dry
1959	45.22	29.22	0.382861	-0.00842	normal	normal
1960	43.608	32.19	-0.51967	0.651452	normal	normal
1961	44.896	27.15	0.20146	-0.46834	normal	normal
1962	42.921	31.63	-0.90431	0.527031	normal	normal
1963	45.385	25.64	0.475242	-0.80383	normal	normal
1964	46.683	30.38	1.201968	0.249306	warm	normal
					very	
1965	41.725	35.26	-1.57392	1.333545	cool	wet
1966	44.297	23.82	-0.13391	-1.2082	normal	dry
1967	43.189	28.96	-0.75426	-0.06619	normal	normal
1968	45.042	34.85	0.283203	1.242451	normal	wet
1969	43.48	28.95	-0.59133	-0.06841	normal	normal
1970	43.132	28.43	-0.78617	-0.18395	normal	normal
1971	43.204	29.76	-0.74586	0.111554	normal	normal
1972	43.113	30.81	-0.79681	0.344843	normal	normal
1973	44.787	32.33	0.140433	0.682557	normal	normal
1974	44.28	26.41	-0.14343	-0.63275	normal	normal
1975	43.992	28.05	-0.30467	-0.26837	normal	normal
1976	47.112	22.26	1.442157	-1.5548	warm	very dry
1977	44.472	30.25	-0.03593	0.220422	normal	normal
1978	42.572	30.7	-1.0997	0.320403	cool	normal
					ext.	
1979	40.55	33.66	-2.23178	0.978057	cool	normal
1980	45.097	28.45	0.313996	-0.1795	normal	normal
1981	46.171	29.88	0.915309	0.138215	normal	normal
1982	42.581	30.34	-1.09467	0.240418	cool	normal
1983	46.293	35.71	0.983614	1.433526	normal	wet
1984	43.078	31.13	-0.8164	0.415941	normal	normal

1985	45.002	33.58	0.260807	0.960282	normal	normal very
1986	43.303	37.67	-0.69043	1.868999	normal ext.	wet
1987	48.618	24.19	2.285338	-1.12599	warm	dry
1988	46.386	21.72	1.035683	-1.67478	warm	very dry
1989	44.264	23.73	-0.15239	-1.22819	normal	dry
1990	45.859	32.58	0.740626	0.738102	normal	normal very
1991	46.006	37.05	0.822928	1.731248	normal	wet
1992	44.068	31.34	-0.26212	0.462599	normal	normal
1993	42.174	46.61	-1.32254	3.85529	cool	ext. wet
1994	43.095	30.33	-0.80689	0.238197	normal	normal
1995	45.941	31.31	0.786536	0.455933	normal	normal
1996	41.975	28.47	-1.43395	-0.17506	cool	normal
1997	42.457	32.56	-1.16409	0.733658	cool very	normal
1998	47.348	28.66	1.574289	-0.13284	warm	normal very
1999	46.895	36.04	1.320663	1.506846	warm very	wet
2000	47.407	28.06	1.607322	-0.26615	warm	normal
2001	43.007	33.58	-0.85616	0.960282	normal very	normal
2002	47.409	30.79	1.608442	0.340399	warm	normal
2003	44.516	24.03	-0.01129	-1.16154	normal	dry very
2004	45.103	36.81	0.317355	1.677924	normal	wet
2005	47.109	35.04	1.440477	1.284665	warm	wet
2006	47.047	30.16	1.405765	0.200426	warm	normal

### Water year (Oct-Sep) southeast MN

Year	SE_T	SE_P	SE_Tz	SE_Pz	T_class	P_class
1892	42.681	38.18	-0.91989	1.503065	normal ext.	very wet
1893	40.764	26.85	-2.02532	-0.81497	cool	normal
1894	44.566	23.89	0.167092	-1.42057	normal	dry
1895	43.262	27.37	-0.58485	-0.70859	normal	normal
1896	43.648	27.63	-0.36227	-0.65539	normal	normal
1897	42.637	29.68	-0.94526	-0.23598	normal	normal
1898	44.617	21.21	0.196501	-1.96888	normal ext.	very dry
1899	40.616	35.61	-2.11066	0.977261	cool	normal
1900	45.371	31.8	0.631292	0.197761	normal	normal
1901	45.102	35.88	0.476174	1.032501	normal	wet
1902	43.929	36.31	-0.20023	1.120476	normal	wet
1903	44.093	42.5	-0.10566	2.386907	normal very	ext. wet
1904	40.846	27.14	-1.97803	-0.75564	cool	normal
1905	43.719	31.4	-0.32133	0.115924	normal	normal
1906	44.965	34.76	0.397174	0.803357	normal	normal
1907	42.559	32.48	-0.99024	0.336885	normal	normal
1908	45.7	30.7	0.821009	-0.02729	normal	normal
1909	43.962	31.84	-0.1812	0.205945	normal	normal
1910	44.944	21.11	0.385064	-1.98934	normal	very dry
1911	45.36	28.15	0.624949	-0.549	normal ext.	normal
1912	40.664	34.37	-2.08298	0.723566	cool	normal
1913	44.984	29.37	0.40813	-0.2994	normal	normal
1914	46.002	33.14	0.995156	0.471916	normal	normal
1915	43.544	33.1	-0.42224	0.463732	normal	normal
1916	43.861	30.58	-0.23944	-0.05184	normal ext.	normal
1917	40.336	30.78	-2.27212	-0.01092	cool	normal
1918	41.715	26.89	-1.47693	-0.80679	cool	normal
1919	46.323	29.63	1.180259	-0.24621	warm	normal
1920	41.74	29.18	-1.46251	-0.33827	cool ext.	normal
1921	48.34	30.69	2.343354	-0.02934	warm	normal
1922	44.525	25.77	0.143449	-1.03593	normal	dry
1923	44.337	26.05	0.03504	-0.97865	normal	normal
1924	42.994	31.25	-0.7394	0.085235	normal	normal
1925	45.152	30.69	0.505007	-0.02934	normal	normal
1926	42.794	27.43	-0.85472	-0.69631	normal	normal
1927	43.161	27.78	-0.6431	-0.6247	normal	normal
1928	43.93	32.64	-0.19965	0.36962	normal	normal
1929	43.239	29.97	-0.59812	-0.17664	normal	normal
1930	44.594	26.49	0.183238	-0.88863	normal ext.	normal
1931	48.113	23.53	2.212455	-1.49422	warm	dry
1932	46.364	30.04	1.203902	-0.16232	warm	normal
1933	45.613	27.36	0.77084	-0.71063	normal	normal
1934	45.692	23.61	0.816395	-1.47786	normal	dry
1935	44.657	33.88	0.219567	0.623315	normal	normal

1936	43.02	26.13	-0.7244	-0.96228	normal	normal
1937	43.774	25.73	-0.28961	-1.04412	normal	dry very
1938	45.526	40.28	0.720672	1.932711	normal	wet
1939	46.237	23.9	1.130667	-1.41852	warm	dry
1940	44.43	24.12	0.088668	-1.37351	normal	dry
1941	46.03	31.29	1.011302	0.093419	warm	normal very
1942	45.917	40.55	0.946141	1.987951	normal	wet
1943	42.476	28.25	-1.0381	-0.52854	cool	normal
1944	44.772	29.55	0.285881	-0.26257	normal	normal
1945	44.25	34.37	-0.01513	0.723566	normal	normal
1946	45.147	28.18	0.502123	-0.54287	normal	normal
1947	45.037	31.16	0.438692	0.066822	normal	normal
1948	45.243	24.05	0.557481	-1.38783	normal	dry
1949	45.873	25.17	0.920768	-1.15869	normal	dry
1950	43.549	27.51	-0.41936	-0.67994	normal	normal
1951	41.924	36.24	-1.35641	1.106155	cool	wet
1952	44.307	29.8	0.017741	-0.21142	normal	normal
1953	45.05	29.46	0.446189	-0.28099	normal	normal very
1954	47.042	32.65	1.594868	0.371666	warm	normal
1955	46.298	24.24	1.165843	-1.34896	warm	dry
1956	42.46	28.06	-1.04732	-0.56742	cool	normal
1957	45.6	31.4	0.763344	0.115924	normal	normal
1958	44.785	22.25	0.293377	-1.7561	normal	very dry
1959	44.532	34.95	0.147486	0.84223	normal	normal
1960	43.708	30.76	-0.32767	-0.01502	normal	normal
1961	44.616	26.34	0.195924	-0.91932	normal	normal
1962	42.458	32.76	-1.04848	0.394171	cool	normal
1963	43.984	23.02	-0.16852	-1.59857	normal	very dry
1964	46.202	24.93	1.110485	-1.20779	warm	dry very
1965	41.307	36.41	-1.7122	1.140936	cool	wet
1966	43.724	24.99	-0.31844	-1.19552	normal	dry
1967	42.588	29.82	-0.97351	-0.20733	normal	normal
1968	44.399	34.43	0.070792	0.735841	normal	normal
1969	43.279	29.33	-0.57505	-0.30758	normal	normal
1970	42.966	31.38	-0.75554	0.111832	normal	normal
1971	42.575	33.46	-0.98101	0.537386	normal	normal
1972	42.689	34.18	-0.91527	0.684693	normal	normal very
1973	43.948	39.67	-0.18928	1.807909	normal	wet
1974	43.573	29.04	-0.40552	-0.36692	normal	normal
1975	43.401	30.72	-0.5047	-0.0232	normal	normal
1976	46.151	25.21	1.081076	-1.15051	warm	dry
1977	43.56	28.5	-0.41301	-0.4774	normal	normal
1978	42.158	37.41	-1.22147	1.345529	cool	wet ext.
1979	40.773	31.41	-2.02013	0.11797	cool	normal
1980	44.948	35.27	0.387371	0.907699	normal	normal
1981	45.632	32.36	0.781797	0.312334	normal	normal
1982	42.567	30.32	-0.98562	-0.10504	normal	normal
1983	46.148	40.27	1.079346	1.930665	warm	very

						wet
1984	43.115	32.68	-0.66962	0.377803	normal	normal
1985	44.873	30.88	0.344122	0.009536	normal	normal
1986	42.875	40.62	-0.80802	2.002272	normal	ext. wet
					very	
1987	47.399	29.08	1.80073	-0.35873	warm	normal
1988	46.218	24.92	1.119711	-1.20984	warm	dry
1989	43.971	25.21	-0.17601	-1.15051	normal	dry
						very
1990	45.412	39.66	0.654935	1.805863	normal	wet
1991	45.912	34.88	0.943258	0.827908	normal	normal
1992	43.923	33.89	-0.20369	0.625361	normal	normal
1993	42.529	43.43	-1.00754	2.577179	cool	ext. wet
1994	43.273	31.64	-0.57851	0.165027	normal	normal
1995	46.143	27.25	1.076463	-0.73314	warm	normal
1996	41.79	26.63	-1.43368	-0.85998	cool	normal
1997	42.514	37.07	-1.01619	1.275967	cool	wet
						very
1998	47.697	35.93	1.972571	1.042731	warm	wet
						very
1999	47.007	39.26	1.574685	1.724026	warm	wet
						very
2000	47.118	32.43	1.638693	0.326655	warm	normal
2001	43.412	35.46	-0.49836	0.946572	normal	normal
						very
2002	47.639	35.08	1.939125	0.868827	warm	normal
2003	44.223	24.64	-0.0307	-1.26712	normal	dry
						very
2004	44.882	39.03	0.349312	1.676969	normal	wet
2005	46.517	34.73	1.292128	0.797219	warm	normal
2006	46.677	31.45	1.384392	0.126154	warm	normal

