

Mn/DOT RWIS Export Data Format

This document describes the format of RWIS csv (comma separated values) files archived in this web site.

All data are in ASCII text, each field separated by a comma. There are three types of files, which are atmospheric, surface, and subsurface data files. The file names follow the following convention.

SSI Data

ssi.atmos.YYYYMMDD.hhmm.txt
ssi.surface.YYYYMMDD.hhmm.txt
ssi.sub.YYYYMMDD.hhmm.txt

Non SSI data such as Vaisala data

ssi2.atmos.YYYYMMDD.hhmm.txt
ssi2.surface.YYYYMMDD.hhmm.txt
ssi2.sub.YYYYMMDD.hhmm.txt

Values outside of the defined ranges have been converted to blank fields. The values not available are left as blank fields. Tables 1-3 describe the column definitions of each type of file.

Table 1: Data Fields of *.atmos.YYYYMMDD.hhmm.txt File

Col#	Data Field	Units
1	System ID	Integer
2	Site ID	Integer
3	Date/Time	MM/dd/yy hh:mm:ss am/pm (12 hr. GMT)
4	Air Temp	Degree C
5	Dew Temp	Degree C
6	RH	Percent
7	Wind Speed Avg	Km/hr
8	Wind Speed Gust	Km/hr
9	Wind Direction Avg	Azimuth – degrees
10	Wind Direction Max	Azimuth – degrees
11	Precipitation Intensity	Text (see Table 4 for detail)
12	Precipitation Type	Text (see Table 4 for detail)
13	Visibility	Meters
14	Air Pressure	Millibars
15	Precipitation Rate	Cm/hr
16	Precipitation Accum	Cm over 24 hr starting at midnight local time
17	10 min Solar	Joules per square meter
18	24 hr Solar	Joules per square meter
19	24 hr Sun	Minutes over 24 hours
20	Air Temp Max	Degree C
21	Air Temp Min	Degree C
22	Wet Bulb Temp	Degree C
23	Last Precipitation Start	MM/dd/yy hh:mm:ss am/pm (12 hr GMT)
24	Last Precipitation End	MM/dd/yy hh:mm:ss am/pm (12 hr GMT)
25	1 hr Precipitation Accum	Centimeters
26	3 hr Precipitation Accum	Centimeters
27	6 hr Precipitation Accum	Centimeters
28	12 hr Precipitation Accum	Centimeters
29	24 hr Precipitation Accum	Centimeters

Table 2: Data Fields of *.surface.YYYYMMDD.hhmm.txt File

Col#	Data Field	Units
1	System ID	Integer
2	Site ID	Integer
3	Sensor ID	Integer
4	Date/Time	MM/dd/yy hh:mm:ss am/pm (12 hr. GMT)
5	Surface Condition	Text (see Table 4 for detail)
6	Surface Temp	Degree C
7	Freeze Temp	Degree C
8	Chemical Percent	Percent
9	Depth	Millimeters
10	Ice Percent	Percent
11	Salinity	Parts/1,000,000
12	Conductivity	Mhos

Table 3: Data Fields of *.sub.YYYYMMDD.hhmm.txt File

Col#	Data Field	Units
1	System ID	Integer
2	Site ID	Integer
3	Sub Sensor ID	Integer
4	Surface Sensor ID	Integer
5	Date/Time	MM/dd/yy hh:mm:ss am/pm (12 hr. GMT)
6	Subsurface Temp	Degree C
7	Subsurface Moisture	Percent
8	Delta-t	Picoseconds

Table 4: Text Field Descriptions

Data Field	Possible Text Entry
Precipitation Intensity	None
	Light
	Moderate
	Heavy
	Slight
	Other
	Unknown
Precipitation Type	None
	Yes
	Rain
	Snow
	Mixed
	Light
	Light Freezing
	Freezing Rain
	Sleet
	Hail
	Other
	Unidentified
	Unknown
	Frozen
Surface Condition	Dry
	Wet
	Chemical Wet
	Snow/Ice Watch
	Snow/Ice Warning
	Damp
	Frost
	Wet Above Freezing
	Wet Below Freezing
	Absorption
	Absorption at Dewpoint
	Dew
	Black Ice Warning
	Other
	Slush

Note: The range of values is determined by the type of sensor at each site. Not all values may be reported.