Weather Metadata

Last updated: 12/8/2025

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Station Overview

Location: Lock 8 Park, Mohawk River (42.8302,-73.9925)

Data collection period: 10/20/2012

Parameters: air temperature, soil temperature, barometric pressure, dew point, radiation (PAR), precipitation, daily cumulative rainfall, relative humidity, wind speed, direction, and gusts.

Contacts

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Station Description

The weather station at Lock 8 is just NW of the Lock 8 buildings. Sensors are installed on a 10' tower that is above nearby vegetation and over 15 meters from any nearby structure. Data is reported to a nearby CR1000X datalogger.

Dew point and daily cumulative rainfall are calculated by the HRECOS database in real-time.

Special Remarks

10/20/2012	**Barometric pressure sensor failure. All data rejected.**
12/29/2013	**Significant rain event not recorded. Site visit on 12/30 revealed that the rain bucket was full of ice, and the wind sensor was frozen in position. Rain bucket cleared same day and wind sensor de-iced on 12/31.**
8/14/2014	**Upgraded wind monitor installed. Other sensors swapped with newly calibrated versions**
6/22/2018-8/3/2018	**PAR sensor failure**
4/16/2024	**Rain bucket unclogged. A large amount of water was funneled through at one time.**
3/7/2025	**Equipment swapped out with newly calibrated components. No barometric pressure sensor.**

Distribution Terms

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Data Quality Assurance

Data collection and verification have been performed on all parameters since the establishment of this station according to the HRECOS Quality Assurance Project Plan(s), which are available at www.hrecos.org

Code Definitions

Parameters

Name	Synonyms	Description	Units
ATMP	TAIR	Air temperature	Degrees Celsius
BARO	PRES	Air pressure	Millibars
DEWP		Dewpoint	Degrees Celsius
GST		Wind gust (15 min. max)	m/s
PAR		Photosynthetically active raditon	mmoles/m^2
RAD		Total radiation	Watts/m^2
RAIN	PRECIP	Rainfall	mm
RAINDC	PRECIP_TOT	Total daily precipitation accumulation	mm
RHUM	RELH	Relative humidity	%
STMP		Soil temperature	
WD	WDIR	Wind direction	Degrees
WDEV	SDWDIR	Wind direction standard deviation	Degrees
WSPD		Wind speed	m/s

Flag code definitions:

A	Accepted data
P	Provisional data
S	Suspect data, consult comment codes
R	Rejected data, consult comment codes
C	Corrected data, consult comment codes

Comment code definitions:

<u>General Errors</u>	
GIM	Instrument malfunction
GIT	Instrument recording error, recovered telemetry data
GMC	No instrument deployed due to maintenance or calibration

GPF	Power failure
GQR	Rejected due to QAQC checks
GSM	See metadata
GMT	Instrument maintenance
GDP	Power down
GPR	Program reload
Sensor Errors	
SIC	Incorrect calibration, multiplier, or offset
SNV	Negative value
SOC	Out of calibration
SSM	Sensor malfunction
SSR	Sensor removed for deployment
SSN	Not a number/unknown value
Other comments	
CAF	Acceptable calibration/accuracy error of sensor
CDF	Data appear to fit conditions
CRE	Significant rain event
CSM	See metadata
CVT	Possible vandalism
CWE	Significant weather event

Weather sensor specifications

Parameter: Air temperature
Units: Celsius
Sensor Type: Platinum resistance thermometer
Model#: HMP45AC
Range: -40 C to +60 C
Accuracy: ±0.2°C at 20°C

Parameter: Relative humidity
Units: %
Sensor Type: Capacitive polymer
Model#: HMP45AC
Range: 0 to 100%
Accuracy: At 20°C: ±2% (0-90%); ±3% (90-100%)
Temperature dependence: ±0.05%/°C

Parameter: Barometric pressure
Units: mbar
Sensor Type: Silicon capacitive
Model#: CS106
Range: 500 to 1100 mbar
Accuracy: ±0.3 mb @ +20°C; ±0.6 mb @ 0° to 40°C; ±1.0 mb @ -20° to +45°C; ±1.5 mb @ -40° to +60°C

Parameter: Precipitation
Units: mm
Sensor Type: Tipping bucket with magnetic switch
Model#: CS TE525WS-L
Accuracy: Up to 1 in./hr: ±1%; 1 to 2 in./hr: +0, -2.5%; 2 to 3 in./hr: +0, -3.5%

Parameter: Radiation (PAR)
Units: mmoles/m^2
Sensor Type: Silicon PV detector (400-700 nm)
Model#: LI190SB
Temperature dependence: 0.15% per °C max.

Parameter: Wind direction
Units: Degrees
Sensor Type: Mechanical vane
Model#: RM Young 05103
Range: 355 Degrees
Accuracy: ± 3 Degrees

Parameter: Wind speed
Units: m/s
Sensor Type: Mechanical propeller
Model#: RM Young 05103
Range: 0 to 100 m/s
Accuracy: ± 0.3 m/s or 1% of reading

Parameter: Soil temperature
Units: Celsius
Sensor type: Aluminum-housed thermistor
Model#: CS109
Range: -50 C to 70 C
Accuracy: ± 0.2 C