

Weather Metadata

Last updated: 12/8/2025

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Station Overview

Location: Schodack Island, ([42.501200, -73.780381](#))

Data collection period: 4/25/08 – 4/8/13; 12/11/13 – 10/31/2024

Parameters: air temperature, barometric pressure, dew point, radiation (total¹, PAR²), precipitation, precipitation, relative humidity, wind speed, direction, and gusts

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Station Description

The Schodack Island weather station is on a small rock pile island just west of Schodack Island State Park and just south of the I-90 by-pass bridge. All sensors are attached to the tower holding the U.S. Coast Guard navigation aids (marker # 197), except for the barometer, which is onshore. The island is at least 130 meters from either shore so there is no interference from nearby vegetation or ridgelines. Meteorological sensors report the following parameters every 15 minutes. Dew point and daily cumulative rainfall are calculated in real-time. Data is transmitted from a Campbell Scientific CR1000 datalogger via RF401 radios to a CR800 datalogger onshore.

Special Remarks

Date	Remark
06/05/2009	Rain bucket unclogged
7/13/2010	Rain bucket unclogged. Sensors replaced with newly calibrated ones.
7/13/2010-7/16/2010	Wind monitor deployed incorrectly
11/3/2011- 11/28/2011	Power failure
12/20/2011	Equipment maintenance
8/2012	Equipment maintenance
4/8/2013 – 12/11/2013	Communications failure

12/11/2013	Sensors replaced with newly calibrated ones
4/21/2014	Wind monitor was deployed incorrectly in Dec 2013. All data corrected retroactively.
11/16/2021	Equipment maintenance
10/31/2024	Weather station was dismantled. Plans pending to relocate onshore next to water quality station.

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 radiation	umoles/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:

General Errors

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: $\pm 0.2^{\circ}\text{C}$ 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: W/m²

Sensor Type: Pyranometer

Model#: Kipp and Zonen CM 11

Range: Light spectrum 305-2800 nm

Parameter: Wind direction

Units: Degrees

Sensor Type: Mechanical vane

Model#: MetOne 034B

Accuracy: ± 4 Degrees

Parameter: Wind speed

Units: m/s

Sensor Type: Mechanical propeller

Model#: MetOne 034B

Range: 0 to 100 m/s

Accuracy: ± 1.1 m/s

Weather Sensor Specifications After 12/11/2013

Parameter: Air temperature

Units: Celsius

Sensor Type: Platinum resistance thermometer

Model#: HC2S3

Range: -40 C to +60 C

Accuracy: ±0.1°C at 23°C

Parameter: Relative humidity

Units: %

Sensor Type: Capacitive polymer

Model#: HC2S3

Range: 0 to 100%

Accuracy: $\pm 0.8\%$ at 23°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: $\pm 1\%$; 1 to 2 in./hr: +0, -2.5%; 2 to 3 in./hr: +0, -3.5%

Parameter: Radiation (PAR)

Units: $\mu\text{moles}/\text{m}^2$

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