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| **C:\HRECOS\HRECOS_logo.small.TIFMetadata: Schodack Island Weather Station**  **Location:** Schodack Island, Schodack, NY ([42.501200, -73.780381](https://maps.google.com/maps?q=42%C2%B030%274.32%22N++73%C2%B046%2749.37%22W&hl=en&ie=UTF8&sll=42.027038,-73.925957&sspn=0.012082,0.01929&t=h&z=16&iwloc=near))  **Data collection period:** 4/25/08 – 4/8/131, 12/11/13 – present2  **Parameters:** air temperature, barometric pressure (beginning 7/13/10), dew point, radiation (total1, PAR2), precipitation, precipitation, relative humidity, wind speed, direction & gusts | |
| **Disclaimer:** HRECOS is a research project. No warranty—either express or implied—is made for any information presented by this program.  The island is owned by the U.S. Coast Guard. Permission for research work at this site can be obtained with the permission of the HRECOS Coordinator and through the U.S. Coast Guard, Saugerties, NY office. | |
| **Contact**:  Brittney Flaten  HRECOS Coordinator/Site Manager  NY State Dept. of Environmental Conservation  256 Norrie Point Way Staatsburg, NY 12580 Phone: 845-889-4745 x117  Email: brittney.flaten [at] dec.ny.gov |  |
| **Station details:**  The Schodack Island weather station is on a small rock pile island (42°30'4.32"N, 73°46'49.37"W) 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 as part of the Schodack Island Hydrologic Station. 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: air temperature, barometric pressure, radiation (PAR; photosynthetically active radiation, which is 400-700 nm spectrum band), precipitation, relative humidity, wind speed, direction & gusts. See section “Sensor Specifications” for more information. Dew point and daily cumulative rainfall are calculated by the HRECOS database in real-time. Data is transmitted from a Campbell Scientific CR1000 datalogger via RF401 radios to a CR800 datalogger onshore, and then transmitted to the HRECOS database via cell modem. | |
| **Notes (site visits, events, etc.):**   * 06/05/2009: Gary Wall cleaned out some detritus and spider webs from the rain gauge. At the time, the anemometer appeared to be operating smoothly and there was nothing on or blocking the PAR sensor. The RH radiation shield looked clean as well. * 7/13/2010: Site was visited by Gary Wall and Alene Onion. The rain gauge was partially blocked by detritus. New barometric pressure, rain gauge, and wind direction sensors were installed as well as a newly calibrated relative humidity and temperature sensor. * 7/13/2010 – 7/16/2010: The connecting cable was partially blocking the movement of the newly installed wind sensor. This was remedied on 7/16/2010. * 11/3/2011 – 11/28/2011: Transmission failed during this period and was repaired on 11/28/2011 9:30. * 12/20/11: Installed replacement datalogger. All other equipment in working order. * 8/2012: Site inspection, all equipment in working order, changed battery * 4/8/2013: All equipment except datalogger in good working order, no debris in rain gage. Unable to connect to logger via radio link and hard wire connection is only sustainable for short periods. Station communication down until further notice. * 12/11/2013: All sensors replaced with new equipment except for the rain gauge, which was calibrated on-site. NOTE: Original radiation sensor which measured total radiation was replaced with a PAR (photosynthetically active radiation) sensor (see sensor specifications tables). * 4/21/2014: Corrected wind vane direction and fixed ground adapter installation. Rain gauge was clean. Wind direction data will be retroactively corrected in database. * 11/16/2021: last known date of service and maintenance to weather station. | |
| **Distribution terms:**  We request that attribution be given whenever HRECOS material is reproduced and re-disseminated and the HRECOS Coordinator be notified prior to publications including any part of the data. Example citation: “Hudson River Environmental Conditions Observing System. 2012. Schodack Island Weather Station data. Accessed April 13th, 2016. <http://www.hrecos.org/>.” | |
| **Data Quality Assurance:**  Data collection and verification have been performed since 2010 according to the HRECOS Quality Assurance Project Plan, which is available at [www.hrecos.org](http://www.hrecos.org) (“About HRECOS” -> “Supporting Documents”). See relevant section on following pages for QAQC flag and comment code definitions. | |
| **QAQC Comment Code definitions:**  General Errors  [GIM] instrument malfunction  [GIT] instrument recording error, recovered telemetry data  [GMC] no instrument deployed due to maintenance/calibration  [GPF] power failure/low battery  [GQR] rejected due to QAQC checks  [GSM] see metadata  [GMT] instrument maintenance  [GDP] power down  [GPR] program reload  Sensor Errors  [SIC] incorrect calibration constant, multiplier or offset  [SNV] negative value  [SSN] not a number/unknown value  [SOC] out of calibration  [SSM] sensor malfunction  [SSR] sensor removed  Comments  (CAF) acceptable calibration/accuracy error of sensor  (CDF) data appear to fit conditions  (CRE) significant rain event  (CSM) see metadata  (CVT) possible vandalism/tampering | |

**Table 1. Weather station sensor specifications.**

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| Parameter | Model | Sensor type | Units | Range | Accuracy | Notes |
| **Air temperature** | HC2S3 | Resistance thermometer | °C | -40°C to +60°C | ±0.1°C at 23°C | Deployed on 12/11/2013 |
| **Air temperature** | HMP45C | Platinum resistance thermometer | °C | -40°C to +60°C | ±0.2°C at 20°C | Replaced with HC2S3 on 12/11/2013 |
| **Barometric pressure** | CS106 | Silicon capacitive | mbar | 500-1100 mbar | ±0.3 mb @ +20°C; | NA |
| **Precipitation** | TE525 WS | Tipping bucket/ magnetic reed switch | mm | NA | Up to 1 in./hr: ±1% 1 to 2 in./hr: +0, -2.5% 2 to 3 in./hr: +0, -3.5% | 8” funnel diameter; 0.01” precip per bucket tip |
| **Photosynthetically Active Radiation (PAR)** | LI-190SB | Silicon PV | mmol/  m^2 | 400-700 nm light spectrum waveband | NA | Deployed on 12/11/2013 |
| **Radiation (Total)** | Kipp & Zonen CM 11 | Pyranometer | W/m2 | Light spectrum band: 305-2800 nm | NA | Replaced with LI-190SB on 12/11/2013 |
| **Relative humidity** | HC2S3 | Capacitive polymer | % | 0 to 100% non-condensing | ±0.8% at 23°C | Deployed on 12/11/2013 |
| **Relative humidity** | HMP45C | Capacitive polymer | % | 0 to 100% non-condensing | At 20°C: ±2% (0-90%); ±3% (90-100%) | Replaced with HC2S3 on 12/11/2013 |
| **Wind direction;**  **speed** | RM Young 05103-5 | Potentiometer; transducer coil | Degrees; m/s | 0-100 m/s | ±3˚; ±0.3 m/s (0.6 mph) or 1% of reading | Deployed on 12/11/2013 |
| **Wind direction;**  **speed** | MetOne 034B | Potentiometer; transducer coil | Degrees; m/s | 0-100 m/s | ±4˚; ±0.11 m/s @ <10.1 m/s or ±1.1% @ >10.1 m/s | Replaced with RM Young on 12/11/2013 |