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| **Metadata: Pier 84 Weather Station****C:\HRECOS\HRECOS_logo.small.TIFLocation:** Pier 84, New York, NY ([40.764628, -74.003186](https://maps.google.com/maps?q=40+45%2752.66%22+N,+74+00%2711.47%22+W&hl=en&ll=40.764222,-74.002748&spn=0.00321,0.004823&sll=42.769037,-74.00485&sspn=0.003103,0.015965&t=h&z=18) )**Data collection period:** 12/21/2012 – present**Parameters:** air temperature, barometric pressure, precipitation, daily cumulative rainfall, 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. |
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| **Location and equipment:**The purpose of the Hudson River Park Pier 84 station is to generate a consistent and precise stream of water quality and atmospheric data to the general public and interested stakeholders. The goal in collecting this data is to ultimately inform Hudson River management policies, restoration efforts, and extreme event planning. This station was selected due to its location near the NYC Harbor and in lower Manhattan, one of the world’s most heavily developed and densely populated urban environments. The Hudson River Park Pier 84 station is located on the southeastern piling at the end of Pier 84’s finger pier (40°45'52.66"N, 74°00'11.47"W). The meteorological station is located approximately 3 meters above the water. The records Air Temperature (°C), Relative Humidity (%), Wind Speed (m/s), Wind Direction (°), Precipitation (mm), and Barometric Pressure (hPa) (see sensor specs section for details). All data is recorded by a CR200 datalogger and transmitted to the HRECOS database via cellular modem. |
| **Special remarks / notes:** * 6/17/2015 – Beginning 1/1/2014, all rainfall data is flagged as suspicious due to sensor overestimating rain events. Sensor will be evaluated.
* 3/3/2016 – Weather sensor unit removed for maintenance and assessment of rain sensor.
* 3/3/16 - 6/27/16 – Weather unit removed for factory service (no issues found).
* 5/18/17 – Bird Spikes Installed.
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| **Distribution terms:**HRECOS requests 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. Pier 84 Station data. Accessed April 13th, 2016. <http://www.hrecos.org/>.” |
| **Data Quality Assurance:**Data collection and verification have been performed since the establishment of this station (December 2012) 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 [SDG] Suspect due to sensor diagnostics[SIC] Incorrect calibration constant, multiplier or offset[SIW] Incorrect wiring[SMT] Sensor maintenance[SNV] Negative value[SOC] Out of calibration[SQR] Data rejected due to QAQC checks[SSD] Sensor drift[SSN] Not a number / unknown value[SSM] Sensor malfunction[SSR] Sensor removedComments (CAF) Acceptable calibration/accuracy error of sensor (CCU) Cause unknown(CDF) Data appear to fit conditions(CML) Snow melt from previous snowfall event(CRE) Significant rain event(CSM) See metadata(CVT) Possible vandalism/tampering (CWE) Significant weather event |

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

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| Parameter | Model | Sensor type | Units | Range | Accuracy | Misc. |
| **Air temperature** | WXT520 | Capacitive | °C | -52 to 60 °C | ±0.3 °C | NA |
| **Barometric pressure** | WXT520 | Capacitive | hPa | 600-1100 hPa | ±0.5 hPa at 0 to +30 °C (+32 to +86 °F)±1 hPa at -52 to +60 °C (-60 to +140 °F) | NA |
| **Precipitation** | WXT520 | Acoustic | mm | 0 – 200 mm/hr | 5% |  |
| **Relative humidity** | WXT520 | Capacitive | % | 0 to 100% | ±3 %RH within 0-90 %RH±5 %RH within 90-100 %RH | NA |
| **Wind direction** | WXT520 | Ultrasound via 3 transducers | degrees | 0 – 360 degrees | ±3 degrees | NA |
| **Wind speed** | WXT520 | Ultrasound via 3 transducers | m/s | 0 to 60 m/s | ±3% at 10 m/s | NA |