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| **Metadata: George Washington Br. Station (Inactive)**  C:\HRECOS\HRECOS_logo.small.TIF  **Location:** Palisades Interstate Park, NJ (H[U40.851967, -73.959267U](https://maps.google.com/maps?q=40+51.118%E2%80%99+N,++73+57.556%E2%80%99+W&hl=en&ie=UTF8&ll=40.851329,-73.958695&spn=0.012303,0.01929&sll=37.0625,-95.677068&sspn=52.240038,79.013672&t=m&z=16&iwloc=near)H)  **Data collection period:** 01/01/2008 – 10/01/2012  **Parameters:** dissolved oxygen, salinity, turbidity, water temperature, water depth, and water elevation | |
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| **Data Quality Assurance:**  This station’s data has been verified since 9/23/2011, although since the equipment was not routinely calibrated according to the standards of the HRECOS Quality Assurance Project Plan (available at H[Uwww.hrecos.orgU](http://www.hrecos.org)H) much of the data has been coded as suspicious or rejected.  See relevant section on following pages for QAQC flag and comment code definitions. | |
| **Data collection period:**  This station had significant sensor and transmission issues, therefore the availability of some parameters and data are not continuous for the quoted time period.  Water elevation calculations began on 11/22/2011 when the site was surveyed to NAVD88. | |
| **Location and equipment:**  The George Washington Bridge station was located within the Palisades Interstate Park near Hazard’s Dock, which is located near the base of the bridge’s western tower. The site consisted of two parts, with the datalogger, solar panels and antenna being located on a steel mast near the shoreline, and an in-water gauge attached to the shoreline. The shoreline at this location consists of a rock slope. A stainless steel mount was fabricated and is bolted to a rock on the slope. A 4” schedule 40 PVC pipe is clamped to this mount and angles down into the water. Due to the angle of the slope, the depth of the instrument is approximately 5-6’.  A YSI 6600EDS sonde was equipped with sensors to measure salinity, temperature, dissolved oxygen, depth and turbidity. In the first quarter of 2012, we began adjusting depth for barometric pressure retroactively (once per quarter). Depth measurements from EST 9/23/2011 00:00:00 until 10/1/2012 00:47 were adjusted for barometric pressure using the following formula provided by YSI:  Depth = Depth + ((1013- Barometric Pressure) \* .0102)  Data is run through a YSI 6200 datalogger which transmits the data to Stevens Institute via a Ritron DX-450 HF radio. | |
| **Special remarks / notes:**   * As of 10/08/2012 the radio for transmitting data failed. Station non-operational. | |
| **Parameter Codes:**  ABSP – absolute pressure (psia)  COND- conductivity (microsiemens)  DEPTH- water depth relative to instrument (meters)  DO- dissolved oxygen (mg/L)  DOPC – dissolved oxygen saturation (%)  ELEV- water surface elevation relative to NAVD88 (meters)  PH - pH  PWL- pumping water level SALT- salinity (practical salinity units)  TURB- turbidity (NTU)  WTMP- water temperature (degrees Celsius) | |
| **QAQC Flag Codes**  A- Accepted data  P- Provisional data that were not subject to QAQC review  R- Rejected data  S- Data marked as suspicious by site manager  C- Data were corrected  **QAQC Comment Code definitions:**  UGeneral 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  [GIC] no instrument deployed due to ice  [GNF] deployment tube clogged/no flow  [GOW] out of water event  USensor Errors  [SBO] blocked optic  [STF] catastrophic temperature sensor failure  [SCF] conductivity sensor failure  [SDF] depth port frozen  [SDP] DO membrane puncture  [SDO] DO suspect  [SIC] incorrect calibration/contaminated standard  [SNV] negative value  [SPC] post calibration out of range  [SSD] sensor drift  [SSM] sensor malfunction  [SOW] sensor out of water  [SSR] sensor removed (not deployed)  [STS] turbidity spike  [SWM] wiper malfunction/loss  UComments  (CAB) algal bloom  (CAF) acceptable calibration/accuracy error of sensor  (CAP) depth sensor in water, affected by atmospheric pressure  (CBF) biofouling  (CCU) cause unknown  (CDA) DO hypoxia < 28 percent saturation  (CDB) disturbed bottom  (CDF) data appear to fit conditions  (CFK) fish kill  (CIP) surface ice present at sample station  (CLT) low tide  (CMC) in field maintenance/cleaning  (CMD) mud in probe guard  (CND) new deployment begins  (CRE) significant rain event  (CSM) see metadata  (CTS) turbidity spike  (CVT) possible vandalism/tampering  (CWD) data collected at wrong depth  (CWE) significant weather event | |

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| UParameter | UUnits | USensor type | UModel | URange | UAccuracy | UResolution | UOther |
| **Dissolved oxygen** | Air saturation (%)  ¾¾¾¾  mg/L | Rapid pulse – Clark type, polargraphic  ¾¾¾¾  Membrane | YSI 6562 | 0 – 500%  ¾¾¾¾  0 – 50 mg/L | 0 to 200%: ±2% of reading or 2% air saturation, whichever is greater;  200 to 500%: ±6% of reading ¾¾¾¾  0 to 20 mg/L: ± 0.2 mg/L or 2% of reading, whichever is greater;  20 to 50 mg/L: ±6% of reading | 0.1%  ¾¾¾¾  0.01 mg/L | NA |
| **Salinity** | Parts per thousand (ppt) |  |  | 0 to 70 ppt | +/- 1.0% of reading or 0.1ppt | 0.01 ppt | NA |
| **Turbidity** | Nephelometric Turbidity Units (NTU) | Optical | YSI 6136 | 0 – 1000 NTU | ±2% or 0.3 NTU (whichever is greater) | 0.1 NTU | NA |
| **Water level** | Meters (m) | Stainless steel strain gauge | NA | 0 to 30 ft (9.1 m) | 0-10 ft: +/- 0.01 ft (0.003 m); 10-30 ft: +/- 0.06 ft (0.018 m) | 0.001 ft (0.001 m) | Vented to atmosphere |
| **Water temperature** | Celsius (°C) | Thermistor | YSI 6560 | -5 – 45 °C | ±0.15 °C | 0.01 °C | NA |

**Table 1. YSI 6600-series sonde sensor specifications**