# SSHCZO Metadata Worksheet

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| Data File Name | **SH\_Well\_W9.csv** |
| Date Prepared | 2018-08-10 |
| Descriptive Title | Well 9 |
| Update Frequency | Quarterly |
| Abstract | Groundwater level data and water temperature for well 9 are measured every 15 minutes 2017-01-19 to present. Data are measured using a HOBO U20-001-01 non-vented pressure transducer. |
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| Data Value Descriptions | * COL1: label = TmStamp\_UTC; Timezone = UTC * COL2: label = WaterTemp\_C; water temperature; Units = degC * COL3: label = WL\_BLG\_m; water level below ground; Units = meters |
| Keywords | Groundwater Depth, Groundwater Temperatures, Hydrology |
| Methods | Groundwater level measurements are recorded every 15 minutes on a HOBO U20-001-01 non-vented pressure transducer. Data are manually downloaded monthly using HOBO-Ware Pro software. Sensor depths are calculated in the software by processing with barometric pressure data recorded on a separate HOBO U20-001-01 pressure transducer. Manual field measurements are made using a Solinist electric tape to measure water level below ground. These manual measurements are used to apply a prorated correction between visits to create the final water level below ground (WL\_BLG\_m).  well_diagram  TOC above land surface = 0.51 meters  Sensor level down borehole from MP = 4.60 meters  Sensor below ground level = 4.09 meters  Casing type = pvc  Quality control:  Data were checked by graphing data in R package and comparing to precipitation and manual water level measurements using a Solinist electric tape. Bad, missing, or erroneous data values were removed or marked with -9999 which could be caused during data downloads and/or malfunctioning sensors.  Data gaps:  2017-7-12 to 2018-08-06: sensor was removed for repair; well casing damaged due to fallen trees  2018-08-07 to 2018-0-14: sensor was not installed fully.  2018-08-20 to 2018-08-21: sensor removed for water level measurement  2018-09-09 to 2018-09-11: raw data were nulled; do not know why  2019-01-09 to 2019-02-05: a constant 0.42 correction was applied due to well head casing damaged from a tree fall  2019-02 to 2019-10-14: sporadic gaps due to water level falling below sensor level  2021-04-05 to 2022-02-21: Data removed due to sensor failure and cable pulled out of well |
| Sites | Shale Hills Valley northing/easting: 147848.6787/ 586967.8021; DMS: 40.664444, -77.905712 (NAD\_1983\_StatePlane\_Pennsylvania\_South\_FIPS\_3702); Elevation 265 meters |
| Publications | none |
| Citation | The following acknowledgment should accompany any publication or citation of these data: Logistical support and/or data were provided by the NSF-supported Susquehanna Shale Hills Critical Zone Observatory. |
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