# SSHCZO Metadata Worksheet

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| Data File Name | **SH\_Well\_W11.csv** |
| Date Prepared | 2017-10-19 |
| Descriptive Title | Well 11 |
| Update Frequency | Quarterly |
| Abstract | Groundwater level data and water temperature for well 11 are measured every 15 minutes using a HOBO U20-001-01 non-vented pressure transducer. Recorded data began 2014-11-13 through present. |
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| Data Value Descriptions | * COL1: label = TmStamp\_UTC; Units = Time Zone UTC * COL2: label = Air\_Press\_kPa; barometric pressure; Units = kPa * COL3: label = WaterTemp\_C; water temperature; Units = degC * COL4: 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 depth is calculated in the software by processing with barometric pressure data recorded on a separate HOBO U20-001-01 pressure transducer. Water level below ground determined using the suspended cable length to sensor below ground and taking the difference of the SensorDepth\_m [WL\_BLG\_m = 3.46 - SensorDepth\_m].  well_diagram  TOC above land surface = 0.53 meters  Sensor level down borehole from MP = 3.98 meters  Sensor level below ground = 3.45 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.  ISCO sampling: Data that fluctuate during autosampler run times remain in the data set for comparison during the actual sample times and for response time evaluations. Periods of known autosampler running:  2016-07-28 to 2016-08-15  2016-08-21 to 2016-08-23  2016-09-16 to 2016-09-17  2016-09-29 to 2016-10-05  2016-10-20 to 2016-11-02  2016-11-21 to 2016-12-13  2017-01-01 to 2017-01-05  2017-01-11 to 2017-01-13  2017-01-17 to 2017-01-30  2017-03-24 to 2017-04-16  Other Data gaps:  2014-12-11 to 2014-12-12  2015-03-09  2015-06-27 to 2016-07-28: No sensor was installed  2017-05-26  2017-07-12  2017-08-16  2017-10-24  **Note: Negative values appear due to the water column being above ground within the pvc casing.** |
| Sites | Shale Hills Valley northing/easting: 147848.6787/ 586967.8021; DMS: 40.664769, -77.904123 (NAD\_1983\_StatePlane\_Pennsylvania\_South\_FIPS\_3702); Elevation 270.938 |
| 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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