# SSHCZO Metadata Worksheet

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| Data File Name | **CF\_CFW\_4.csv** |
| Date Prepared | 2018-11-01 |
| Descriptive Title | CFW\_4: Cole Farm Well 4 |
| Update Frequency | Quarterly |
| Abstract | Groundwater level data and water temperature for CFW\_4 measured every 15 minutes using a HOBO U20-001-01 non-vented pressure transducer from 2018-04-17 to present. Data are manually downloaded monthly using HOBO-Ware Pro software. |
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| Data Value Descriptions | * COL1: label = TmStamp\_UTC; Timezone = Coordinated Universal Time * 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 | The monitoring well was drilled on 2018-04-04 with a Shaw BackPack Drill using 51mm diameter diamond bit. The well was drilled to a depth of 4.5 meters. Core extracted from the well at depths  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 = 4.16-SensorDepth\_m].  TOC above land surface = 1.12 meters < 2019-04-04 13:30  = 1.09 meters >= 2019-04-04 13:30  Sensor location down borehole from MP = 4.36 meters  Well Depth = 4.5 meters  Casing type = pvc  Casing diameter = 3.175 cm  Casing depth = 4.5 meters  Screened depth = 0.05 to 4.5 meters  The water table below land surface obtained by subtracting the head pressure and above ground casing length from the sensor depth.  Quality control:  Data are checked by plotting data in R package and comparing to precipitation and manual water level measurements using a Solinist electric tape. Sensor data are corrected to the manual measurements and prorated between visits. Bad, missing, or erroneous data values are removed or marked with -9999 which could be caused during data downloads and/or malfunctioning sensors.  The Top of Casing (TOC) measurement changed after the freeze/thaw cycle over winter. The changed is applied on 2019-04-04.  Data gaps present:  Sampling:  Data shown during dates below correspond to dates when the wells were pumped for sampling purposes:  2018-05-29  2018-08-27  2018-09-08  2018-09-12  2018-09-28  2018-10-10  2018-10-26  2018-11-02  2019-03-13  2019-04-04  2019-05-15  2019-06-18  2019-07-25 |
| Sites | Cole Farm, Huntingdon County, Barree Township Lat/Long DMS: 40.6349/ -77.941192; (NAD\_1983\_StatePlane\_Pennsylvania\_South\_FIPS\_3702); Elevation 249 |
| 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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