# SSHCZO Metadata Worksheet

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| Data File Name | **CF\_CFW\_W1.csv** |
| Date Prepared | 2017-11-08 |
| Descriptive Title | CFW\_1: Cole Farm Well 1 |
| Update Frequency | Quarterly |
| Abstract | Groundwater level data and water temperature for CFW\_1 measured every 15 minutes using a HOBO U20-001-01 non-vented pressure transducer from 2017-05-26 to present. Sensor level during this period is set to 9.745 meters below ground level. |
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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 | 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 = 9.745-SensorDepth\_m].  TOC above land surface = 0.2 meters  Sensor location down borehole from MP = 9.945 meters  Well Depth = 62.789 meters  Casing type = steel  Casing diameter = 15.2 cm  Casing depth = 12.802 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 were checked by graphing 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 were removed or marked with -9999 which could be caused during data downloads and/or malfunctioning sensors.  Data gaps present:  2017-08-11: Response time measurements & sampling taken during this period; water level  dropped below sensor level  2017-08-15: Response time measurements & sampling taken during this period; water level  dropped below sensor level  2017-08-28: water level drop and return due to well pumping/sampling  2017-10-11: water level drop and return due to well pumping/sampling  2017-10-18: water level drop and return due to well pumping/sampling  2018-02-23: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2018-04-17: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2018-07-11: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2018-08-16: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2018-09-09: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2018-11-02: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-01-19: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-03-13: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-04-25: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-05-15: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-06-18: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-07-25: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed  2019-08-07: water level drop and return due to well pumping/sampling; water level dropped  below sensor level and data removed |
| 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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