# CZO Metadata Worksheet

|  |  |
| --- | --- |
| Data File Name | **SITE\_Water Table\_YEAR\_Raw Compiled.dat** |
| Date Prepared | 3/11/2011 |
| Descriptive Title | Real Time Water Table Data |
| Update Frequency | Monthly |
| Abstract | The Real-Time Soil Moisture Monitoring Network provides integrated observation of water, energy and temperature in the soils of the Shale Hills Susquehanna Critical Zone Observatory watershed. Water table is measured at between 1 and 4 locations at 10 sites. At 8 sites, water table were measured with 2 different data loggers, thus have different time stamps. There are 2 or 3 time stamps for each of these data sheets, with the timestamp applying to the data in the subsequent columns. |
| InvestigatorContact Info | Dr. Henry Lin, Crop and Soil Science, The Pennsylvania State University, 444 Agricultural Sciences and Industries Building, University Park, PA. 814-865-6726 henry.lin@psu.edu |
| Data Value Descriptions | 1\_Well\_summary\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTableRaw, Units = mV, TimeSupport = 10 min
* COL4: label = WaterTable, Units = mm, TimeSupport = 10 min

6\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = Water Table, Units = mm, TimeSupport = 10 min

11\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = Water Table, Units = mm, TimeSupport = 10 min

15\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = Water Table1, Units = cm, TimeSupport = 10 min
* COL4: label = Water Table2, Units = cm, TimeSupport = 10 min
* COL5: label = Water Table3, Units = cm, TimeSupport = 10 min
* COL6: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL7: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL8: label = Water Table-O, Units = mm, TimeSupport = 10 min

51\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTable, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = WaterTable, Units = mm, TimeSupport = 10 min

53\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTable, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = WaterTable, Units = mm, TimeSupport = 10 min

55\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTable, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = WaterTable, Units = mm, TimeSupport = 10 min

60\_Soil Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTable, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = WaterTable, Units = mm, TimeSupport = 10 min

61\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = Water Table, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = Water Table, Units = mm, TimeSupport = 10 min

74\_Water Table\_YEAR\_RawCompiled* COL1: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL2: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL3: label = WaterTable, Units = cm, TimeSupport = 10 min
* COL4: label = Day of year, UTCOffset=-4, TimeZone=EST.
* COL5: label = Decimal time of day, UTCOffset=-4, TimeZone=EST.
* COL6: label = WaterTable, Units = mm, TimeSupport = 10 min
 |
| Keywords | Soil, water, hydrology, hydropedology, soil science, water table |
| Methods | Water table is measured with pressure transducersWater table is measured with a 0.5 m Odyssey Capacitance Water Level Recorder. Odysseydatarecording.com |
| Citation | The following acknowledgment should accompany any publication or citation of these data: Logistical support and/or data were provided by the NSF-supported Shale Hills Susquehanna Critical Zone Observatory. |
| Publications | 1. Graham, C., and H.S. Lin. 2011. Controls and frequency of preferential flow occurrence at the Shale Hills Critical Zone Observatory: A 175 event analysis of soil moisture response to precipitation. Submitted to *Vadose Zone Journal*(in press).2.   Takagi, K. and H.S. Lin. 2011. Temporal Evolution of Soil Moisture Spatial Variability in the Shale Hills Catchment. Submitted to *Vadose Zone Journal*.3.   Takagi, K. and H.S. Lin. 2011. Soil-Terrain Attributes in Relation to Surface and Subsurface Soil Moisture in the Shale Hills Catchment. Submitted to *Geoderma*.4.   Andrews, D.M., H.S. Lin, Q. Zhu, L. Jin, and S.L. Brantley. 2011. Dissolved organic carbon export and soil carbon storage in the Shale Hills Critical Zone Observatory. Submitted to *Vadose Zone Journal.*5.   Jin, L., D. M. Andrews, G. H. Holmes, C. J. Duffy, H.S. Lin, and S. L. Brantley. 2011. Water chemistry reflects hydrological controls on weathering in the Shale Hills Critical Zone Observatory. Submitted to *Vadose Zone Journal.*6.   Zhang, J. H.S. Lin, and J. Doolittle. 2011. Subsurface Lateral Flow as Revealed by Combined Ground Penetrating Radar and Real-Time Soil Moisture Monitoring. Submitted to *Hydrological Processes*.7.   Zhu, Q., and H.S. Lin. 2010. Interpolation of soil properties based on combined information of spatial structure, sample size and auxiliary variables. *Pedosphere* 20:594-606.8.   Lin, H.S., and X.B. Zhou. 2008. Evidence of Subsurface Preferential Flow Using Soil Hydrologic Monitoring in the Shale Hills Catchment. *European J. of Soil Science*59:34–49.9.   Lin, H.S. 2006. Temporal stability of soil moisture spatial pattern and subsurface preferential flow pathways in the Shale Hills Catchment. *Vadose Zone Journal* 5:317-340.10. Lin, H.S., W. Kogelmann, C. Walker, and M.A. Bruns. 2006. Soil moisture patterns in a forested catchment: A hydropedological perspective. *Geoderma*131:345-368. |
| Data Use Notes | The user of Shale Hills Susquehanna CZO data agrees to provide proper acknowledgment with each usage of the data. Citation of the name(s) of the investigator(s) responsible for the data set, in addition to the generic statement above, constitutes proper acknowledgment. Author(s) (including Shale Hills Susquehanna CZO investigators) of published material that makes use of previously unpublished Shale Hills Susquehanna CZO data agree to provide the Shale Hills Susquehanna CZO data manager with four (4) copies (preferably reprints) of that material for binding as soon as it becomes available. The user of Shale Hills Susquehanna CZO data agrees not to resell or redistribute shared data. The user of these data should be aware that, while efforts have been taken to ensure that these data are of the highest quality, there is no guarantee of perfection for the data contained herein and the possibility of errors exists. These data are defined as either public or private, such that a password may be required for access. |