# SSHCZO Metadata Worksheet

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| Data File Name | **LRRT\_SoilMoisture.csv** |
| Date Prepared | 8/3/2016 |
| Descriptive Title | Soil Moisture, Electrical Conductivity, & Soil Temperature Data |
| Update Frequency | Continuously – data transmitted every 3 hours |
| Abstract | The Ground Hydrological Observation Gear (GroundHOG) sites in the Susquehanna Shale Hills Critical Zone Observatory provide integrated observation of water, energy, and temperature in the Garner Run field sites within the greater Shavers Creek watershed. Soil moisture, electrical conductivity, and soil temperature are measured at 3 depths. Each of these measurements is made using HydraProbes from Stevens Instruments. |
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| Data Value Descriptions | * COL1: label = TmStamp, UTCOffset=-5, TimeZone=UTC * COL2: label = RecNum * COL3: label = SoilMoist\_10\_Avg, Units=m3/m3, TimeSupport= 10 min, Offset = -10 cm * COL4: label = SoilMoist\_20\_Avg, Units=m3/m3, TimeSupport= 10 min, Offset = -20 cm * COL5: label = SoilMoist\_40\_Avg, Units=m3/m3, TimeSupport= 10 min, Offset = -40 cm * COL6: label = SoilEC\_T\_10\_Avg, Units = S/m, TimeSupport = 10 min, Offset = -10 cm * COL7: label = SoilEC\_T\_20\_Avg, Units = S/m, TimeSupport = 10 min, Offset = -20 cm * COL8: label = SoilEC\_T\_40\_Avg, Units = S/m, TimeSupport = 10 min, Offset = -40 cm * COL9: label = SoilT\_C\_10\_Avg, Units = degC, TimeSupport = 10 min, Offset = -10 cm * COL10: label = SoilT\_C\_20\_Avg, Units = degC, TimeSupport = 10 min, Offset = -20 cm * COL11: label = SoilT\_C\_40\_Avg, Units = degC, TimeSupport = 10 min, Offset = -40 cm |
| Keywords | Soil, water, hydrology, hydropedology, soil science, soil moisture, soil electrical conductivity, soil temperature |
| Methods | Soil moisture, soil electrical conductivity, and soil temperature are measured at each site with Stevens Hydra Probe II ([www.stevenswater.com](http://www.stevenswater.com)). Sensors are wired to a Campbell Scientific CR1000 data logger using SDI-12 protocol. The data logger is wired in series using MD-485 devices to allow cellular data transmission from the ridge top. A Cell210 modem is connected to this data logger to transmit data from the ridge top, valley floor, and mid-slope locations. |
| Sites | Sites:   * Garner Run: Leading Ridge Top Pit  |  |  | | --- | --- | | Latitude | 40.694 | | Longitude | -77.9186 | |
| 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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