# SSHCZO Metadata Worksheet

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| Data File Name | **SPVF\_SiTS\_O2.csv** |
| Date Prepared | 2020-03-19 |
| Descriptive Title | SPVF SiTs CO2 |
| Update Frequency | Continuously streamed – updates every 15 minutes |
| Abstract | Two [Apogee SO-411 O2](https://www.apogeeinstruments.com/so-411-sdi-12-soil-response-thermistor-reference-oxygen-sensor/) sensors are installed at 50 and 70 centimeters in a pit adjacent to the normal CZO GroundHOG SPVF pit. Sensors are wired to Campbell Scientific CR1000X data logger. Measurements are made during a 15 minute period and averaged, stored, and transmitted to campus.  Date installed: 2020-03-19 |
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| Data Value Descriptions | * COL1: label = TmStamp; Timezone = UTC * COL2: label = RecNum; data logger reference line number * COL3: label = O2\_50\_concentration\_Avg; units = %; concentration of O2 at 50 cm * COL4: label = Sensor\_50\_mv\_Avg; units = mv; raw readings in mv * COL5: label = Sensor\_50\_TC\_Avg; units = degC; average sensor temperature at depth of 50cm * COL6: label = O2\_70\_concentration\_Avg; units = %; concentration of O2 at 70 cm * COL7: label = Sensor\_70\_mv\_Avg; units = mv; raw readings in mv * COL8: label = Sensor\_70\_TC\_Avg; units = degC; average sensor temperature at depth of 0cm |
| Keywords | Soil Gas, Soil Temperatures, O2 |
| Methods | A small pit was hand dug to a depth of 80 cm. Looking upslope O2 sensors (paired with O2 sensors) were installed at a depth of 50 and 70 cm on the right-side of the upslope face. A 6-inch pvc pipe was installed vertically beside them to allow for additional microbial electrodes. The pit was backfilled by hand maintaining soil type continuity as best as possible.  Two [Apogee SO-411 O2](https://www.apogeeinstruments.com/so-411-sdi-12-soil-response-thermistor-reference-oxygen-sensor/) sensors are installed at 50 and 70 centimeters in a pit adjacent to the normal CZO GroundHOG SPVF pit. Sensors are wired to Campbell Scientific CR1000X data logger. Measurements are made during a 15 minute period and averaged, stored, and transmitted to campus. These are raw data but due compensate for soil temperature. The measurements do not consider atmospheric pressure or relative humidity. |
| Sites | Shale Hills Valley: 40.664511, -77.906281 (NAD\_1983\_StatePlane\_Pennsylvania\_South\_FIPS\_3702) |
| 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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