# CZO Metadata Worksheet

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| Data File Name | Soil Gas Concentration Data |
| Date Prepared | 4/10/2014 |
| Descriptive Title | Shale Hills CZO Soil Gas Concentration and Flux Data (Level 1) |
| Update Frequency | Monthly (sporadic) |
| Abstract | The soil CO2 and N2O concentrations and various soil properties for the planar slope and swale sampling locations in the Susquehanna Shale Hills Critical Zone Observatory watershed. |
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| Data Value Descriptions | 2008 – 2010 (pCO2):   * COL1: label=Sample Label. * COL2: label=Sample Location. * COL3: label=Date. * COL4: label=Local time of day, Time Zone=EST. * COL5: label=Field Tech. * COL6: label=Soil depth (m). * COL7: label=Elevation (m). * COL8: label=pCO2 (ppmv).   2008 – 2010 (CO2 Flux):   * COL1: label=Sample Location. * COL2: label=Date. * COL3: label=Elevation (m). * COL4: label=Elevation error (m). * COL5: label=CO2 Flux (μmolm-2s-1). * COL6: label=Air temperature (ºC). * COL7: label=Soil temperature at 7 cm (ºC).   2013:   * COL1: label=Site Name * COL2: label=Date * COL3: label=Depth (cm) * COL4: label=CO2 concentration (ppm) * COL5: label= N2O concentration (ppm) |
| Keywords | CO2 Concentration, Soil CO2, N2O Concentration, Soil N2O, CO2 Flux |
| Methods | 2008 – 2010:   * CO2 concentration data were measured using a LICOR 7000. * Air temperatures were obtained from the RTHnet website. * Soil temperature were measured using a ST09 Supco soil temperature probe * Gas sampler elevations were measured using a Garmin GPSmap 76CSx GPS.   2013:   * Soil gas measured in situ using a Model 1412 Infrared Photoacoustic Spectroscopy (PAS) gas analyzer powered by a model EU1000i portable electric Honda generator. All gas flux sampling took place between 09:00 and 13:00 hours – the time of lowest diurnal temperature variability. |
| 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 | Hasenmueller, E.A., Jin, L., Lin, H., Brantley, S.L., Kaye, J.P. Topographic and depth controls on soil CO2 concentrations in a small temperate watershed, *Applied Geochemistry*, in prep. |
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