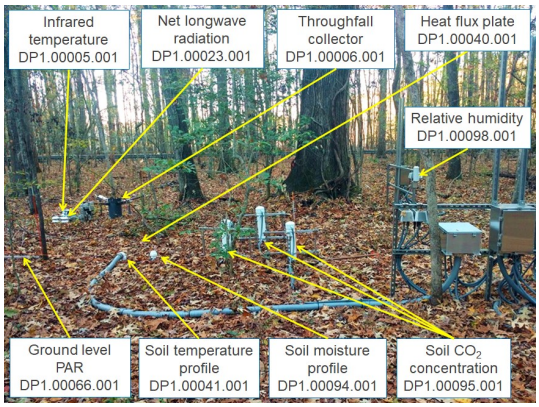
Soil temp 1 pager draft

Thursday, February 6, 2020 10:59 AM

Soil temperature (DP1.00041.001)



Sensor-based soil plot at D08 LENO. Not all measurements are made in every soil plot.

What is measured?
Temperature of the soil in degrees Celsius (°C)

Collection methodology
Soil temperature is measured using a platinum resistance thermometer in all five sensor-based soil plots at a range of depths. Measurements are made at 0.1 Hz and data are published in 1- and 30-minute averaging intervals.

What do I get?

- Soil temperature time series for each measurement location (e.g., NEON.D10.RMNP.DP1.00041.001.002.504.001.ST...csv)
- Sensor positions (...sensor_positions...csv): Depths, latitudes, longitudes, and elevations
- Variables (...variables...csv): Description and units for each column header
- Readme (...readme...csv): Data product description, file naming convention, change log, and more

Data quality
Each temperature measurement is accompanied by a final quality flag (finalQF). NEON recommends only using data where finalQF = 0. Data with finalQF = 1 are potentially inaccurate and should only be used with caution. The final quality flag is based on automated QA/QC tests, including range, step, and spike tests, as well as a manually set science review flag if applicable. Each measurement is accompanied by its 95% confidence interval (soilTempExpUncert) based only on known and quantified uncertainties.

Common data manipulations
Sensor depth (zOffset; m) and the latitude, longitude (referenceLatitude, referenceLongitude; °), and elevation (m) of the soil plot reference corner are in the sensor positions file (...sensor_positions...csv). Use the HOR.VER component of the time series file name to link to the corresponding row in the HOR.VER column of the sensor positions file. Time series file naming convention: NEON.DOM.SITE.DPL.PRNUM.REV.**HOR.VER**.TMI.DESC.YYYY-MM.PKGTYPE.GENTIME.csv

Where can I find out more?

Document	Description
NEON.DOC.001571	Soil temperature algorithm theoretical basis document (ATBD)
NEON.DOC.000442	Soil temperature sensor configuration
NEON.DOC.011081	TIS plausibility QA/QC tests
NEON.DOC.000783	TIS time series despiking QA/QC test
NEON.DOC.001113	TIS final data quality metrics plan
NEON.DOC.000785	TIS uncertainty budget estimation plan

How do I cite this data in my publications?
(citation will be autogenerated)