# CZO Metadata Worksheet

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| Data File Name | CZchemDB |
| Important Notes | This is a macro-enabled Microsoft ACCESS file. Your computer security must be set to medium to allow macros to be enabled. IMPORTANT: Upon opening file, click “Options” and enable content when Security Warning appears.  |
| Descriptive Title | Critical Zone Chemical Database |
| Update Frequency | As data becomes available. |
| Abstract | The chemical database includes chemical analysis and characterization for regolith and rock samples collected from the Susqhuehanna Shale Hills CZO, the Luquillo CZO, the Jemez River-Santa Catalina CZO, the Boulder CZO, and the Calhoun CZO as well as other sites in the United States and abroad. Additionally, the database provides contextual information for the chemical data, including site characterization and sampling collection, preparation, and analysis methods.  |
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| Data Value Descriptions (only a brief description is given here) | * Location: City, State, Country; Mean Annual Precipitation; Mean Annual Temperature
* Site: Latitude, Longitude; Elevation; Slope degree; Aspect; Landscape position; Land use; Vegetation; Parent lithology; Exposure Age; Erosion rate; Depth to bedrock; Soil taxonomy; SSURGO\_ID
* Sample: Sample medium; Sampling date and time; Sampling depth (cm); Collection method
* Preparation: Method of preparation
* Analysis: Method of analysis; Date; Laboratory conducting analysis
* Data Text: Textual information (e.g. soil characterization: horizon, color, structure))
* Data Value: Numeric information (e.g. chemical concentrations)
* Additional information: Persons, institutions, and publications associated with data
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| Keywords | Soil, geochemistry, soil chemistry, water chemistry  |
| Methods | Methods vary amongst samples and are noted in the database. |
| 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 | Publications are noted in the database. To cite this database, please cite “Niu et al. (2014) An Ontology Driven Relational Geochemical Database for the Earth’s Critical Zone: CZchemDB, Journal of Environmental Informatics, 23(2):10-23, doi: 10.3808/jei.201400266.  |
| 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. |