# SEV LTER Metadata Template

Comprehensive metadata are necessary to support data quality control, efficient dataset archiving and retrieval, and functional re-use of the data both by owners and secondary users. The Sevilleta LTER requires complete documentation for long-term maintenance and distribution of study datasets. Metadata elements requested in this form are consistent with elements required by the Ecological Metadata Standard (EML), which was adopted by the LTER Coordinating Committee in 2004.

Sevilleta metadata consists of information about:

1. Why the study was done
2. Who is involved with study design, data collection, analysis and data management
3. Detailed study methods, so that a secondary user will be able to understand what was done without contacting the study principal investigator.
4. Where the study was done, with GPS points so the site or plots can be relocated.
5. Detailed variable information

Tips for completing a data package (data + metadata):

* Data file and variable names should be brief, yet descriptive.
* Data file names should not contain spaces or symbols (except '\_', '-', and '.'). File names should be descriptive of the data contained in the file.
* Data files should generally be in a flat table format, similar to a SQL database table. Rows are observations, and columns are variables.
* Data files should be in a csv or other delimited text file format. Excel (e.g., .xlsx, .xls, etc.) files are not acceptable.
* Variable names should be descriptive, short, and machine readable. They should not begin with a number or symbol. They should only contain letters, numbers, and underscores ('\_'). They should not contain spaces. (e.g., 'air\_temp' or 'airTemp')
* Variable names used in the data file(s) should match the names used in this metadata document.
* Use ISO 8601 date formats. (e.g., YYYY-MM-DD)

Data should be in csv text file. If starting with an Excel spreadsheet, make sure it does not contain any formulas and comments on cells. If you need comments, put them in their own columns, such as 'field\_notes' and 'qaqc\_notes'. If data were used in a database and major table linking is necessary to analyze the data, de-normalize data into a flat files - do not just export database tables.

Please fill in this metadata form to the best of your ability and submit it to the Sevilleta Information Manager, sevim@unm.edu. If you have questions at any stage, contact the SEV IM.Allow several weeks for review and revision of your data package.

## Dataset Title

Be descriptive, more than 5 words.

## Short name or nickname you use to refer to this dataset:

## Abstract

Provide an abstract describing the purpose of the research project *-* include what, why, where, when, and how

## Investigators

List in order as you would for a paper. Include an e-mail address, organization and preferably an ORCID ID. If you don't have an ORCID ID, get one, it's easy and free! Go to <http://orcid.org/> .

Required Roles include the 'creator' who is the author of the dataset, 'PI' who is the principal investigator, and 'contact' who is the dataset contact. If individuals have multiple roles, list them on a separate line for each role. Other roles are acceptable, but a creator, PI and contact are required. Add table rows as needed.

| First Name | Middle Initial | Last Name | Organization | Role | e-mail address | ORCID ID (optional) |
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## Other personnel names and roles

Field crew, data entry, etc. Include an e-mail address, organization and preferably an ORCID ID.

| First Name | Middle Initial | Last Name | Organization | Role | e-mail address | ORCID ID (optional) |
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## License

Select a license for release of your data. We have 2 recommendations: [CC0 – most accommodating of data reuse](https://creativecommons.org/publicdomain/zero/1.0/), and [CCBY – requires attribution](https://creativecommons.org/licenses/by/4.0/)

## Keywords

List keywords and separate with commas. Using keywords from a controlled vocabulary (CV) will improve the future discovery and reuse of your data. The LTER CV is effective at describing ecological and environmental data. [Access the LTER CV here](http://vocab.lternet.edu/vocab/vocab/index.php). [Try this text mining service to extract LTER CV keywords from your abstract or methods](http://vocab.lternet.edu/keywordDistiller/). Additionally, determine one or two keywords that best describe your lab, station, and/or project (e.g., Sevilleta Field Station, SEV LTER). This will help others discover your data by site/project.

## Funding Table

Add rows to table if several grants were involved, list only the main PI, start with main grant first:

| PI First Name | PI Middle Initial | PI Last Name | PI ORCID ID (optional) | Title of Grant | Funding Agency | Funding Identification Number |
| --- | --- | --- | --- | --- | --- | --- |
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## Timeframe

* Begin date
* End date
* Data collection ongoing/completed

## Geographic Location

Tips: SEV core sites are: Deep Well, Five Points Grass, Five Points Creosote, Blue Grama, Sepultura Canyon, Cerro Montoso, Goat Draw, Black Butte, Sevilleta Field Station, Bronco Well, Rio Salado Grass, Rio Salado Creosote, Red Tank. If you do not know the coordinates of your site, then enter the coordinates for the bounding box of the Sevilleta: North: 34.42, South = 34.19, East = -106.513, West = -107.08. If you are working at multiple sites or plots within the SEV, provide GPS coordinates for each site and/or plot. High accuracy GPS recordings can be made by contacting Lauren Baur ([lbaur@unm.edu](mailto:lbaur@unm.edu)). COORDINATES MUST BE ENTERED in DECIMAL DEGREES AND NAD83. There is a degrees/minutes/seconds to decimal converter at <http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html>.

Include:

* Verbal description (elevation, landform, geology, soils, hydrology, vegetation, climate, site history, etc.):
* North bounding coordinates (decimals)
* South bounding coordinates (decimals)
* East bounding coordinates (decimals)
* West bounding coordinates (decimals)

## Taxonomic Species or Groups

Tips: For plants, include the USDA plant codes and most up to date plant taxonomy from USDA PLANTS website <https://plants.sc.egov.usda.gov/java/> so that data are concordant with SEV LTER plant codes. For animals, check the SEV LTER website to match species names and species codes with any overlapping species monitored by the LTER.

## Methods

Be specific. Include instrument descriptions (name, manufacturer, model number), or point to a protocol online. If this is a data compilation, specify datasets used, preferably their DOI or URL plus general citation information. If the data package is associated with a manuscript, you may paste the methods from the manuscript.

## Data Table

* Column name: exactly as it appears in the dataset. Avoid special characters, dashes and spaces. See tips at the beginning of this template.
* Description of the variable: be specific, it can be lengthy
* Unit: avoid special characters and describe units in this pattern: e.g., microSiemenPerCentimeter, microgramsPerLiter, absoptionPerMolePerCentimeter
* Code explanation: if you use codes in your column, explain them in this way: e.g., LR=Little Rock Lake, A=Sample suspect, J=Nonstandard routine followed
* Data format: specify exactly how the date and time is formatted. Use ISO 8601 date formats. If reporting datetimes, specify the time zone and whether or not daylight savings was observed if that is important to data interpretation. (e.g., YYYY-MM-DD (2019-02-22), YYYY-MM-DDThh:mm:ssZ (2019-02-22 14:33:23)). See the [Wikipedia 'ISO 8601'](https://en.wikipedia.org/wiki/ISO_8601) page for more info. If you are trying to convert Excel date formats to ISO 8601, see the most upvoted answer by Dirk Bester on [this Stack Overflow page](https://stackoverflow.com/questions/27388761/how-to-convert-a-date-in-excel-to-iso-8601-format).
* If a code for no data or missing data is used, specify what the code is. (e.g., -99999 or NA)

**Table file name:** Add the name of the data table/file

**Table description:** Add a brief 1-2 sentence description of the data table/file

Add rows as needed. Use a separate table for each data file in your data package.

| Column name | Description | Unit or  code explanation or date format | Empty value code |
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## Articles

List articles that cite this dataset (optional)

| Article DOI or URL (DOI is preferred) | Article title | Journal title |
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## Scripts/Code (Software)

List any software scripts/code you would like to archive along with your data. These may include processing scripts you wrote to create, clean, or analyze the data. Submit copies of the scripts as part of the data package.

| File name | Description | Scripting language |
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## Data Provenance

Were these data derived from other data? If so, document this information so data users will know where the data came from.

| Dataset title | Dataset DOI or URL | Creator (name & email) | Contact (name & email) |
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## QA/QC Procedures

Describe how the data were checked for accuracy. (e.g., "Data were range checked using a SAS program." *or* "Data were entered twice and then compared to find errors.")

## Notes & Comments

If you are a graduate student, provide an estimated/projected date of public release for your data.