

Welcome!

ESS-DIVE Tutorial Preparation

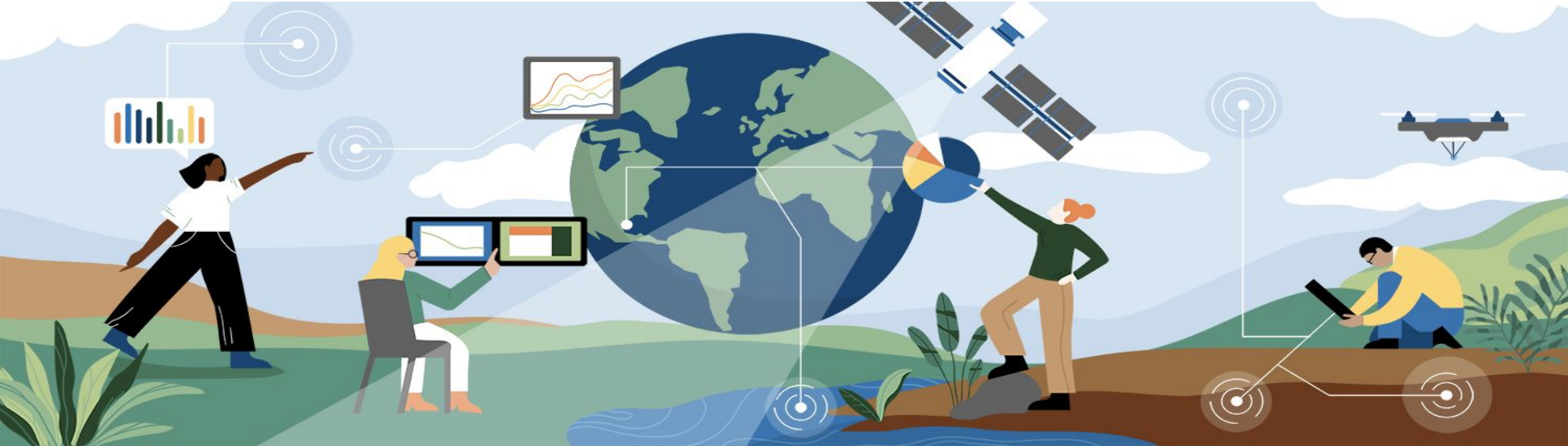
If you want to participate in today's hands on activities,
please use this time to:

Create an ORCID

<https://orcid.org/register>

Sign in to Sandbox

[https://data-sandbox.ess-d
ive.lbl.gov](https://data-sandbox.ess-dive.lbl.gov)



Creating and Publishing High-Quality Datasets on ESS-DIVE

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Environmental Data Science Senior Research Associate



ESS PI Meeting, May 2023

Tutorial Overview

Getting Started

- Register as a data contributor
- Design a data submission workflow
- Choose an upload method

Submitting Datasets

- Create your metadata
- **Hands-on:**
Submit through the web form
- Application programming interface (API) tools

After Submission

- Reviewing Metadata Assessment Reports
- Dataset sharing and external links
- Dataset review and publication workflow

Improving Dataset Quality

- Introduction to ESS-DIVE Reporting Formats

🌐 When poll is active, respond at **pollev.com/essdive**

📱 Text **ESSDIVE** to **22333** once to join

Familiarity with ESS-DIVE

Have published datasets
previously

New registered
contributor

Considering publishing
data through ESS-DIVE

Unfamiliar with ESS-DIVE



Takeaways

By the end of this presentation, you should be able to..

- **Create** and dataset metadata
- **Submit** datasets using the Data Submission Web form
- **Share** your datasets with collaborators and team members
- Utilize ESS-DIVE's **help documentation, resources, and support**

*Create a streamlined data publication workflow so that you can
efficiently publish high quality data on ESS-DIVE.*

GETTING STARTED

**Becoming a data contributor & designing
your dataset submission workflow**

Data contributor registration form



You can request to become a data contributor by filling out our [registration form](#).

You will need to provide:

- Name and email address
- ORCID
- DOE Project Affiliations
- Project Principal Investigator (PI) Contact Information

The screenshot shows the top portion of a web registration form. At the top is the ESS-DIVE logo with the tagline "Deep Insight for Earth Science Data". Below the logo is the title "ESS-DIVE New Data Contributor Registration". A paragraph explains that ESS-DIVE is for DOE-sponsored environmental research data and requires contributors to specify their affiliation. It provides a link to a "New Project Data Storage form" and a contact email for questions. Below this is a user identification section showing the email "emilyarobles@lbl.gov" with a "Switch account" link and a cloud icon. A red asterisk indicates a required field. The form then has two input sections: "Email *" with a text box labeled "Your email", and "First Name *" with a text box labeled "Your answer".

ESS-DIVE
Deep Insight for Earth Science Data

ESS-DIVE New Data Contributor Registration

ESS-DIVE is primarily intended to host DOE-sponsored environmental research data. Hence we require all data contributors to specify their affiliation with DOE projects, and agree to our terms of use.

If you are not associated with a DOE project and want to store your project data on ESS-DIVE, please fill out the New Project Data Storage form: <https://bit.ly/ess-dive-new-project>. If you have any questions about our terms for storage, contact ess-dive-support@lbl.gov.

emilyarobles@lbl.gov [Switch account](#)

* Required

Email *

Your email

First Name *

Your answer

Dataset publication at a glance

Collect your data files



01

Collect and organize data files related to your findings, tables, and figures.

Use ESS-DIVE **reporting formats** to standardize and make data FAIR

Upload data + metadata



02

Ensure metadata complies with ESS-DIVE requirements.

Choose your upload method and **submit** your dataset.

Review your **automated assessment report**.

Review and publish



03

Request publication and address revision requests from ESS-DIVE team review.

Meet the funding/journal publishing time frame.

Submit vs Publish



Submit

Send new datasets or changes to existing datasets to ESS-DIVE.

Submitted datasets can be shared with others but they are not publicly available.

You can submit as many times as necessary until you are ready to request publication.



Publish

Request to publish your completed dataset on ESS-DIVE for public access.

Selecting “Publish” will begin the dataset review process.

Published datasets can still be revised if necessary.

Choosing data to publish



ESS-DIVE stores diverse data

- Data from projects ***funded by*** or ***related to*** DOE Environmental System Science Program
- Observational, experimental, and modeling activities in the Earth sciences.



Choosing data to publish

Data related to paper publications

- Data that are used to create figures/tables and data that support the conclusions of paper and validate results

Data collected as part of a project

- Meet BER and other funding requirements by making data publicly available in ESS-DIVE

Publishing *scientifically useful data*

- Raw data, processed data, code, model inputs/outputs, or products built off of data

Considerations to divide datasets

Author contributions

Based level of contributor effort for portions of data - affects author order

Size of Data

Could impact upload method, usability/accessibility

Campaign / Time Period

Data from a field campaign or season that need to be viewed together

Data Type & Use

Particular data type from a project - e.g. continuously generated sensor data, sample data, data synthesis product (raw data vs processed)



Choosing an upload method

Upload Method	File volume	No. of files	Considerations
Data Submission Web Form	< 10 GB	< 100	Immediate upload. Easy to follow guidance throughout form.
Dataset API	10 - 500 GB	< 100	Takes initial investment of time to set up, but immediate upload. Technical skills helpful but not required (see tutorials).
Globus Data Transfer Service	> 500 GB	> 100	Longest process, and requires collaboration with Support Team and use of a separate desktop app. Can use if unfamiliar with scripting.



Contact ess-dive-support@lbl.gov if you need help with data transfer

Choosing an upload method

Dataset API

- A **programmatic** method of creating new datasets and editing existing datasets
 - Upload files and create metadata using JSON-LD
- Bulk edit/upload capabilities
- Download any public datasets

Data Submission Web Form

- **Manually** enter dataset metadata on the ESS-DIVE user interface (UI)
- Create and edit datasets **one at a time**
- Drag and drop or select files from your file manager to upload data
- Edit datasets through the web form

What size data are you expecting your project will produce?

Files < 10 GB

Files 10 - 500 GB

Files > 500 GB

Unsure



What upload method(s) do you expect your project will use?

Dataset Submission
Web Form

Dataset API

Globus/Large data
transfer methods

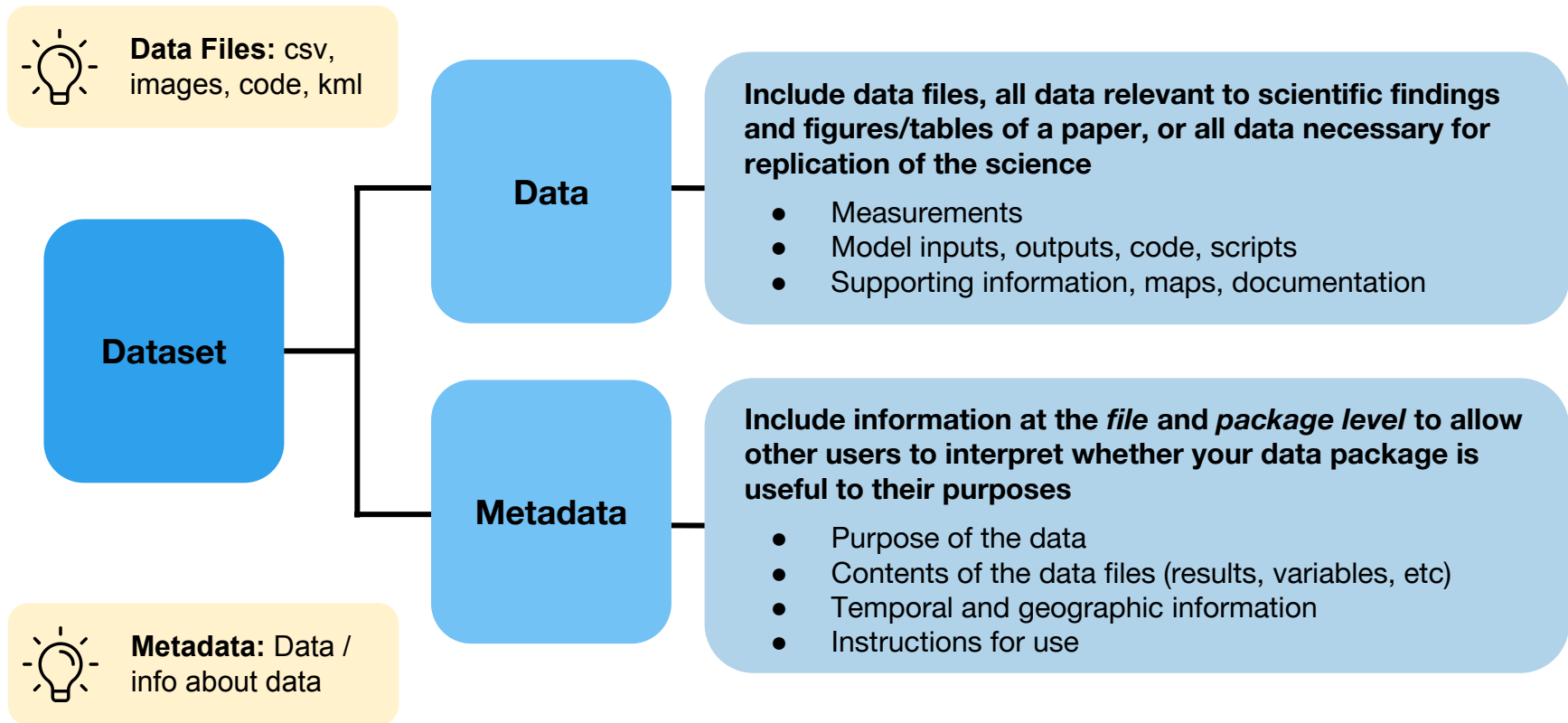
Unsure



DATASET METADATA

Requirements and recommendations

Components of a dataset



Package-level metadata requirements

Overview *	Overview	
People	<p>Title *</p> <p>A brief but meaningful title for this data package. A good title includes the topic, geographic location, dates, and scale of the data.</p> <p>Example: Sapflow and Soil Moisture Raw sensor data, Jan 2016-Apr 2016, BR-Ma2: Manaus</p>	
Dates		
Locations	<p>Existing DOI and Alternate Identifiers</p> <p>DOI and alternate identifiers of the data package if it has been previously published elsewhere. Alternate identifiers should be entered as many as needed below.</p> <p>Example: http://dx.doi.org/10.15486/NGT/XXXXXX</p>	
Methods	<p>Abstract *</p> <p>A concise description of the purpose and content of this data package. A good abstract would provide users with adequate information to determine if the data are useful for their needs.</p> <p>Example: Raw output from the data logger connected to 9 sapflow and 5 soil moisture sensors at the site where the sensors were installed, and other installation/maintenance details. No data processing was performed.</p>	
	<p>Keywords *</p> <p>Keywords that should be associated with this data package to enable thematic searches</p>	

<p>Overview</p> <ul style="list-style-type: none"> Title* Existing DOI & Alternate Identifiers Abstract * Keywords* Data Variables Publication Date Usage Rights* Project* Funding Organization* DOE Contracts Related References 	<p>People</p> <ul style="list-style-type: none"> Contact* Creators* Contributors <p>Dates</p> <ul style="list-style-type: none"> Start Date End Date <p>Locations</p> <ul style="list-style-type: none"> Geographic Description Bounding Box Coordinates <p>Methods</p>
---	--

Data Submission Guidelines: <https://ess-dive.lbl.gov/archive/>

Dataset Requirements: <https://docs.ess-dive.lbl.gov/contributing-data/package-level-metadata>

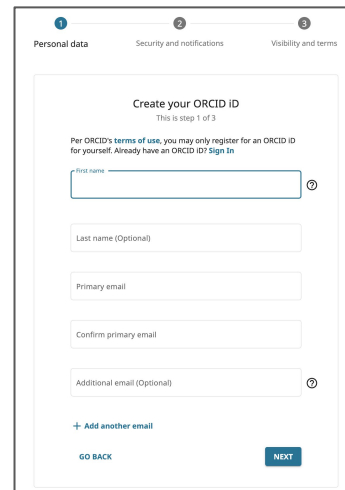
SUBMITTING DATASETS

Set up an ORCID

Requires an ORCiD

The ESS-DIVE Sandbox and Main Portal both require an ORCiD account to login and submit data.

<https://orcid.org/register>

A screenshot of the ORCID registration form, step 1 of 3. The form is titled "Create your ORCID ID" and includes a sub-header "This is step 1 of 3". Below this, there is a paragraph of text: "Per ORCID's terms of use, you may only register for an ORCID ID for yourself. Already have an ORCID ID? Sign In". The form contains several input fields: "First name", "Last name (Optional)", "Primary email", "Confirm primary email", and "Additional email (Optional)". There are also links for "GO BACK" and "NEXT" at the bottom.

Navigate to ESS-DIVE Sandbox

Sandbox is a test system where you can practice uploading data. This data is **NOT** preserved in ESS-DIVE.

<https://data-sandbox.ess-dive.lbl.gov>

This is a temporary web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

✉ Need help? Email us at ess-dive-support@lbl.gov



Login with ORCiD account



This is a temporary web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

Need help? Email us at ess-dive-support@sl.gov

ESS-DIVE
Deep Insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT **SUBMIT DATA** **Sign in with Orcid**

Search Search phrase

Filter by:

- Project
- Identifier
- Region description
- Creator
- Year
- Access

DATASETS 1 TO 25 OF 42

1 2 Next Sort by Most recent

Hockstad L ; Hanel L (2018): **Inventory of U.S. Greenhouse Gas Emissions and Sinks**. CDIAC, ESS-DIVE repository. Dataset. [ess-dive-a9c6c8979724e46-20210521T114858119272](#)

Goyet C ; Healy R ; Ryan J (2000): **Global Distribution of Total Inorganic Carbon and Total Alkalinity Below the Deepest Winter Mixed Layer Depths**. CDIAC, ESS-DIVE repository. Dataset. [ess-dive-6708194c4c2b0b8-20210521T114856338040](#)

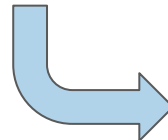
Goyet C ; Key R M ; Sullivan K F ; Tsuchiya M (1997): **CO₂, Hydrographic, and Chemical Data Obtained During the R/V Thomas Washington Cruise TUNES-1 in the Equatorial Pacific Ocean (WOCE section P17C)**. CDIAC, ESS-DIVE repository. Dataset. [ess-dive-486eff1b81566a4-20210521T114853396594](#)

Griffis T ; Hu C ; Baker J ; Wood J ; Millet D ; Erickson M ; Yu Z ; Deventer M J ; Winker C ; Chen Z (2019): **KCMP Minnesota Tall Tower Ammonia Observations and Emission Estimates Dataset 2017-2018**. AmeriFlux Network Management Project, ESS-DIVE repository. Dataset. [ess-dive-00d15e6fee81368-20210521T114850480312](#)

Hide Map >

Satellite Terrain

Keyboard shortcuts Map data ©2022 2000 km Terms of Use



Sign in

Email or 16-digit ORCID ID

example@email.com or 0000-0001-2345-6789

Password

SIGN IN

[Forgot your password or ORCID ID?](#)

Don't have an ORCID ID yet? [Register now](#)

or

Access through your institution

Sign in with Google

Sign in with Facebook

Add email address to your profile



web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

US at ess-dive-support@lbl.gov

S-DIVE
Deep Insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT **SUBMIT DATA** MADISON

Please provide an email address to submit data

Update Email Address

This is a temporary web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

Need help? Email us at ess-dive-support@lbl.gov

ESS-DIVE
Deep Insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT **SUBMIT DATA** MADISON

My Data Settings

Welcome, Madison

Settings

My account

My portals ★ Alpha

Authentication Token

Edit information

Username <https://orcid.org/0000-0003-3114-4421>

First name

Last name

Email Your email is not publicly visible on your profile

Please provide an email address.

Save

My Other Accounts

If you have uploaded data with another account(s), you can link your accounts together so that you can log in with just one and manage all your data.

You haven't linked to another account yet. Send a request below.

Add Another Account

SUBMITTING DATASETS


Walk through using the dataset submission form


Navigate to submission form





This is a temporary web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

✉ Need help? Email us at ess-dive-support@lbl.gov

 **ESS-DIVE**
Deep Insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT **SUBMIT DATA**  **MADISON**

 My Data  Settings

Welcome, Madison

Settings

My account

My portals ★ Alpha

Authentication Token

Edit information

Success! Your profile has been updated.

Username

First name

Last name

Email Your email is not publicly visible on your profile

My Other Accounts

If you have uploaded data with another account(s), you can link your accounts together so that you can log in with just one and manage all your data.

You haven't linked to another account yet. Send a request below.

Dataset Submission Form



The screenshot shows the ESS-DIVE Dataset Submission Form. The header includes the ESS-DIVE logo and navigation links: DATA, PORTALS, SUPPORT, ABOUT, SUBMIT DATA, and a user profile for EMILY. The main content area displays the dataset name "Untitled dataset. null, Dataset. ess-dive-ff8f1f9d7573c40-20220523T160452642" and a list of general instructions for submitting a new data package. A table with columns for Files, Size, Type, Status, and Actions is visible, along with "Add Files" and "Share" buttons. A section titled "Add files to start your dataset" includes a note about upload time and another "Add Files" button. On the left, a sidebar shows the "Overview" tab selected, with fields for Title, Dates, and Locations. Annotations with arrows point to specific elements: the dataset name, the general instructions, the "Add Files" button in the file table, and the "Add Files" button in the "Add files to start your dataset" section.

ESS-DIVE
Deep insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT SUBMIT DATA EMILY

Untitled dataset. null, Dataset. ess-dive-ff8f1f9d7573c40-20220523T160452642

To submit a new data package or make major revisions to an existing data package

1. Add files
2. Enter the required * fields in the sections below
3. Hit the submit button, which appears after the first metadata entry

Files	Size	Type	Status	Actions
				+ Add Files Share

Add files to start your dataset

This can take a few minutes if you have large files. A green check mark will appear when the file is uploaded successfully.

[+ Add Files](#)

Overview * Overview

People

Dates

Locations

Title *
A brief but meaningful title for this data package.
A good title includes the topic, geographic location, dates, and scale of the data.

Example: Sapflow and Soil Moisture Raw sensor data, Jan 2016-Apr 2016, BR-Ma2: Manaus

Citation fills out in real-time as metadata is entered

General instructions about creating a dataset

Click button to start adding files to your dataset

Dataset Submission Form



Files		Size	Type	Status	Actions
▼	Beginner's Tutorial Test Submission	2 KB			<div><div>+</div> Add Files</div> <div>Remove this file</div> <div><div>Share</div></div>
	BeginnerTutorialFile2.pdf	16 KB	Data	✓	<div>Remove</div>
	BeginnerTutorialFile1.rtf	430 B	Data	✓	<div>Remove</div>

Files can be removed by selecting the Remove option under Actions

Fill in metadata fields



Metadata describe the data that you are uploading

Overview *

People

Dates

Locations

Methods

Overview

Title *

A brief but meaningful title for this data package.
A good title includes the topic, geographic location, dates, and scale of the data.

Example: Sapflow and Soil Moisture Raw sensor data, Jan 2016-Apr 2016, BR-Ma2: Manaus

Existing DOI and Alternate Identifiers

DOI and alternate identifiers of the data package if it has been previously published elsewhere. Alternate identifiers provide pertinent information that can identify and locate the data set within your site's data management system.
Enter as many identifiers as needed below.

Example: <http://dx.doi.org/10.15486/NGT/XXXXXX>

Abstract *

A concise description of the purpose and content of this data package.
A good abstract would provide users with adequate information to determine if the data are useful for their needs.

Example: Raw output from the data logger connected to 9 sapflow and 5 soil moisture sensors are provided in xxx.dat. The metadata file (BR-Ma2 E-field log_20160501.xls) has information on locations where the sensors were installed, and other installation/maintenance details. No data processing or QA/QC was done on the raw data packages. Processed data packages will be uploaded separately.

Keywords *

Keywords that should be associated with this data package to enable thematic searches.
Search for a keyword from the list or write in your own. Tab or click enter to add to the list below with one keyword per line. The list contains [GCMD keywords](#).
Use [autocomplete feature](#) to pick from the existing keywords.

Example: EARTH SCIENCE > LAND SURFACE > SOILS

Required fields marked with *

Field descriptions and instructions provided

Example inputs are shown in the entry boxes

Fill in metadata fields



Keywords *

Keywords that should be associated with this data package to enable thematic searches.

Search for a keyword from the list or write in your own. Tab or click enter to add to the list below with one keyword per line. The list contains **GCMD** keywords.

Use autocomplete feature to pick from the existing keywords.

Soil

EARTH SCIENCE > AGRICULTURE > SOILS: CATEGORICAL:GCMD

EARTH SCIENCE > LAND SURFACE > SOILS: CATEGORICAL:GCMD

Some fields have
autocomplete entry options

Project *

Enter the name of the DOE project to associate with this data package. The project is cited as the publisher of this dataset.

If multiple projects were involved, enter the project that had the largest contribution to this data package.

Search by from the list or write in your own. Tab or click enter to add to the list below.

Use autocomplete feature to pick from the existing projects. If you can not find your project name, try searching by the PI name.

NGEE

Next-Generation Ecosystem Experiments (NGEE) Tropics [PI: Jeffrey Chambers]

NASA Contribution to NGEE Tropics [PI: Douglas Morton]

Next-Generation Ecosystem Experiments (NGEE) Arctic [PI: Stan Wullschleger]

Fill in metadata fields



Overview *

People

Dates

Locations

Methods

Overview

Title *
A brief but descriptive title
A good title

Example:

Existing DOI and Alternate Identifiers
DOI and alternate identifiers of the data package if it has been previously published elsewhere. Alternate identifiers provide pertinent information that can identify and locate the data set within your site's data management system.
Enter as many identifiers as needed below.

Example:

Abstract *
A concise description of the purpose and content of this data package.
A good abstract would provide users with adequate information to determine if the data are useful for their needs.

Example: Raw output from the data logger connected to 9 sapflow and 5 soil moisture sensors are provided in xxx.dat. The metadata file (BR-Ma2 E-field log_20160501.xls) has information on where the sensors were installed, and other installation/maintenance details. No data processing or QA/QC was done on the raw data packages. Processed data packages will be uploaded separately.

Submitting your dataset



Overview *

People

Dates

Locations

Methods

Title *

A brief but meaningful title for this data package.

A good title includes the topic, geographic location, dates, and scale of the data.

Example: Sapflow and Soil Moisture Raw sensor data, Jan 2016-Apr 2016, BR-Ma2: Manaus

Existing DOI and Alternate Identifiers

DOI and alternate identifiers of the data package if it has been previously published elsewhere. Alternate identifiers provide pertinent information that can identify and locate the data set within your site's data management system.

Enter as many identifiers as needed below.

Example: <http://dx.doi.org/10.15486/NGT/XXXXXX>

Abstract *

A concise description of the purpose and content of this data package.

A good abstract would provide users with adequate information to determine if the data are useful for their needs.

Example: Raw output from the data logger connected to file (BR-Ma2 E-field log_20160501.xls) has information on installation/maintenance details. No data processing or analysis was performed. Data were uploaded separately.

When you have finished completing at least the **required** metadata fields, you can select submit to save your dataset.

By submitting your dataset, you agree to the [ESS-DIVE terms of use](#).

Submit Dataset

Submitting your dataset

Your dataset edits have been saved.

The dataset will not be publicly available until you click on the Publish button



Next Steps:

- Click "Continue Editing" if you need to make further changes to the dataset.
- Click "I'm Done" if you are finished editing the metadata and uploading files. This will take you out of edit mode, where you can view your dataset and click on the Publish button when ready.



I'm Done

Continue Editing

U.S. DOE > Office of Science > B

Methods

Select "I'm Done"



DOE Contracts

If applicable, list the numbers of any DOE contract under which the data in the package was funded. If the data were a result of a joint effort between two or more DOE Site/Facility Management Contractors, etc., additional DOE contract numbers may be entered.

Search for a DOE Contract from the list of institutions or write in your own. Tab or click enter to add to the list below.

Use autocomplete feature to pick from the existing DOE Contracts.

Example: AC0205CH11231

Related References

Associated publications or data packages where users can learn more about the dataset, processing method, or how the data were used.

Enter the DOIs of all related papers or data packages. If no DOI is available, enter the current citation information for the reference.

Reference 1

Example: Somebody J. (2018), Sap flow and soil moisture coupling in the Amazon, in prep.

If you want to stay on the web form to make additional changes, select "Continue Editing."

"I'm Done" will bring you out of edit mode so that you can view your dataset and publish when ready.

AFTER SUBMISSION

Share, revise, and request publication

Find your datasets



<https://data-sandbox.ess-dive.lbl.gov/data>

Instructions:

1. Login and select “My Data Packages.”
2. See datasets that you have created, or that you have edit or manage permissions
3. View permissions will not show up under “My Data Packages”- use search filters

A screenshot of the ESS-DIVE web application interface. The top navigation bar includes links for DATA, PORTALS, SUPPORT, ABOUT, SUBMIT DATA, and a user profile for MADISON. The main content area displays a list of datasets. The first dataset is titled "Fine-root production, mortality, and standing stock from minirhizotron measurements, AmazonFACE site, Brazil" and is 7 KB in size. It has a green "Add Files" button and a green "Share" button. The second dataset is titled "AmazonFACE_data_20190513170350.zip" and is 2.77 MB in size. It has a "Remove" button. The interface also includes a sidebar with "Overview" and "Data" tabs, and a footer with a "Submit Dataset" button and a link to the ESS-DIVE terms of use.

Additional Resources:

[Data Sharing Tutorial Webinar](#)

[Data Sharing Guide](#)

Viewing your submitted dataset



This is a temporary web site for testing and tutorials only. Click [here](#) for the production ESS-DIVE data archive.

✕

✉ Need help? Email us at ess-dive-support@lbl.gov

ESS-DIVE
Deep Insight for Earth Science Data

DATA PORTALS SUPPORT ABOUT **SUBMIT DATA** EMILY

Home / Search / Metadata

Robles E (2022): Beginner's Tutorial Test Submission. Next-Generation Ecosystem Experiments (NGEE) Tropics, ESS-DIVE repository. Dataset. [ess-dive-e4695e86c73c2fe-20220523T191519546](#) accessed via <https://data-sandbox.ess-dive.lbl.gov/datasets/ess-dive-e4695e86c73c2fe-20220523T191519546> on 2022-05-23

Copy Citation Edit Publish ★

Files in this dataset Package: [ess-dive-034ca72b0046ae3-20220523T191519535](#)

Name	
Metadata: Beginner_s_Tutorial_Test.xml	
BeginnerTutorialFile2.pdf	More
BeginnerTutorialFile1.rtf	More

General

Identifier

Click “Edit” to make further changes

Publish when finished making changes

Download individual files or select “Download All” to download a zip file

Download

Download

Download

Sharing datasets



Work with team members to manage and publish datasets

- **Review datasets** created by team members before or after publication
- **Share progress** with team and project managers
- **Collaborate** to complete a dataset or **hand off work** to team members for completion

Discussed in earlier tutorial



**Project Data
Management**

Dataset Sharing Permission Types

Viewer

- **view** private datasets

Editor


- **view** private datasets
- **edit** metadata
- **add/remove** files
- **publish** datasets


Manager




- **view** private datasets
- **edit** metadata
- **add/remove** files
- **publish** datasets
- **share** datasets with others


Sharing your dataset





DATA PORTALS SUPPORT ABOUT **SUBMIT DATA**  **MADISON**

Files	Size	Type	Status	Actions
 FATES Parameters and Output for Parameter Sensitivity at the Panama Barro Colorado Island Testbed	7 KB			 Add File  Share


Overview 


People

All information entered in this section will be made public once the data package is published.


Contact

Person who should be listed as the contact for the data package for the purposes of the DOI or for users seeking further information for the data.
Only one contact is allowed per data package. If none are entered, you will be set as the contact for this document.

Move Up Move Down 



All information entered in this section will be made public once the data package is published.

By submitting your dataset, you agree to the [ESS-DIVE terms of use](#). 



Review and Edit
datasets with registered
team members

AFTER SUBMISSION

Share, revise, and request publication

Viewing your assessment report



After running your metadata against our standard set of metadata, data, and congruency checks, we have found the following potential issues. Please assist us in improving the discoverability and reusability of your research data by addressing the issues below.



Findable: 100% complete



Accessible: 100% complete



Reusable: 100% complete



Interoperable: 100% complete

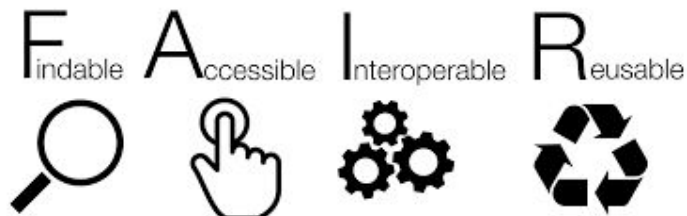


▶ Passed 19 checks out of 19 (informational checks not included).

▶ Warning for 0 checks.

▼ Failed 0 checks.

▶ 3 informational checks.



Viewing your assessment report



▼ Passed 19 checks out of 19 (informational checks not included).

✓	The DOE project name was found in the controlled list of ESS projects.	?	Findable	OPTIONAL	SUCCESS
✓	The one URL found in the metadata resolves correctly.	?	Findable	REQUIRED	SUCCESS
✓	The funding organization "U.S. DOE > Office of Science > Biological and Environmental Research (BER)" was found in the metadata.	?	Findable	OPTIONAL	SUCCESS
✓	The metadata identifier 'ess-dive-b5e2aede2d0f0ef-20220520T180415182358' was found and is resolvable using the DataONE resolve service, but is not publicly readable	?	Accessible	OPTIONAL	SUCCESS
✓	No proprietary data formats found (out of 3 total formats).	?	Reusable	OPTIONAL	SUCCESS
✓	3 creators are present.	?	Findable	REQUIRED	SUCCESS
✓	One contact is present.	?	Findable	REQUIRED	SUCCESS
✓	Found a contact user identifier that contains an ORCID: 'https://orcid.org/0000-0001-9262-7430'	?	Findable	REQUIRED	SUCCESS

External Links



Connect ESS-DIVE datasets to related files and metadata that have already been published on other repositories.

same as

archived at

has part

ESS-DIVE
Deep insight for Earth Science Data

DATA PORTALS PROJECTS GET STARTED ABOUT **SUBMIT DATA** Sign in with Orcid

< Back to search | Home / Search / Metadata

Miller B D ; Carter K R ; Reed S C ; Wood T E ; Cavaleri M A (2022): Data for "Only sun-lit leaves of the uppermost canopy exceed both air temperature and photosynthetic thermal optima in a wet tropical forest". Effects of Warming on Tropical Forest Carbon Cycling: Investigating Temperature Regulation of Key Tropical Tree and Soil Processes, ESS-DIVE repository. Dataset. doi:10.2737/RDS-2022-0036 accessed via <https://data.ess-dive.lbl.gov/datasets/doi:10.2737/RDS-2022-0036> on 2022-11-07

Downloads 0 Citations 0 Views 0 Copy Citation Assessment report

Files in this dataset Package: ess-dive-6696d8f4cac5491-202210171165168988

Name	File type	Size	Download All
Metadata: Data_for_Only_sun_lit_leaves_of_the_uppermost.xml	EML v2.2.0	12 KB	Download

External Links to Data or Metadata

External links for this dataset		
Description	Relationship	URL
doi:10.2737/RDS-2022-0036	[same as] Original publication of this dataset (where the data+metadata can be found)	https://doi.org/10.2737/RDS-2022-0036

Selecting “Publish”



Robles E (2022): Beginner's Tutorial Test Submission. Next-Generation Ecosystem Experiments (NGEE) Tropics, ESS-DIVE repository. Dataset. [ess-dive-e4695e86c73c2fe-20220523T191519546](https://data-sandbox.ess-dive.lbl.gov/datasets/ess-dive-e4695e86c73c2fe-20220523T191519546) accessed via <https://data-sandbox.ess-dive.lbl.gov/datasets/ess-dive-e4695e86c73c2fe-20220523T191519546> on 2022-05-23











 Copy Citation

Edit 

Publish 

Files in this dataset Package: [ess-dive-034ca72b0046ae3-20220523T191519535](#)

				Download All 
 Name		File type	Size	
 Metadata: Beginner_s_Tutorial_Test.xml		EML v2.2.0	2 KB	Download 
 BeginnerTutorialFile2.pdf	More info	PDF	16 KB	Download 
 BeginnerTutorialFile1.rtf	More info	Rich Text Format (RTF)	430 B	Download 

Your publication request has been received. An ESS-DIVE admin will check the submission and contact you through the email address in your profile. Note that the publication status will not prevent you from editing your data package. The data package will not be published until you respond to our email and address all issues regarding your submission.

Use Cases to Store your Data Externally

Scientific, practical, or other funding compliance reasons

1) Original Dataset Publication

same as

2) Complete Copy of Data Files

archived at

- Large Project Data Archives
 - SPRUCE
 - Watershed Function SFA
 - NGEE Tropics
- Approved Data Repositories
 - EDI
 - USGS ScienceBase

3) Individual Files

has part

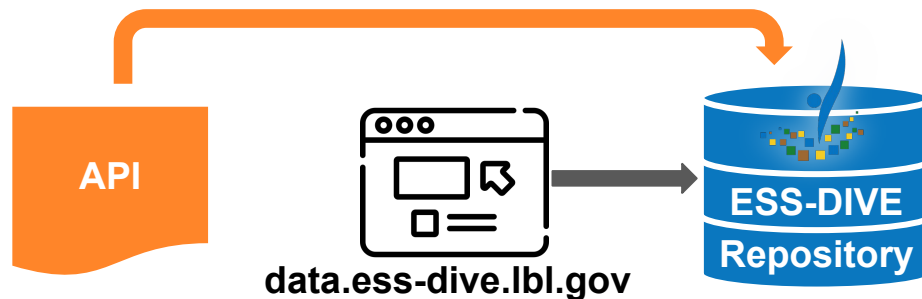
- Data Analysis Platform
 - Github
 - Google Earth Engine
- Large Data
 - File size
 - Number of files

SUBMITTING DATASETS

Using the Dataset API

Dataset API Capabilities

- Upload **multiple data packages** at once
- **Repeat metadata** fields across multiple data packages
- **Copy published metadata** to a new data package
- Bulk submissions for **moving data from project archive** to ESS-DIVE
- **Large data** (above 10GB to 500GB per upload attempt)



API Tutorials

Option 1: Open in browser
using Binder

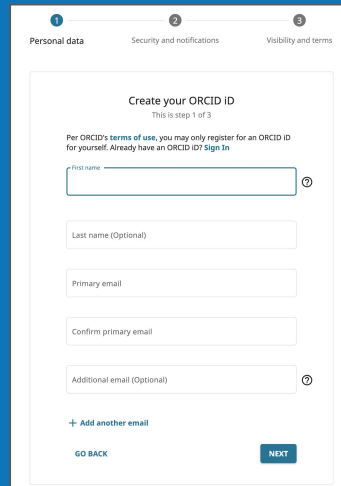


Option 2: Download files
and open in Jupyter or
RStudio apps

<https://github.com/ess-dive/essdive-tutorials>



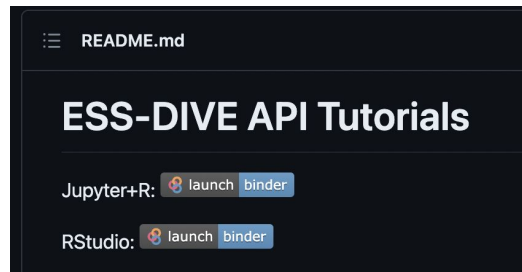
Reminder



An ORCID is required to use the API

<https://orcid.org/register>

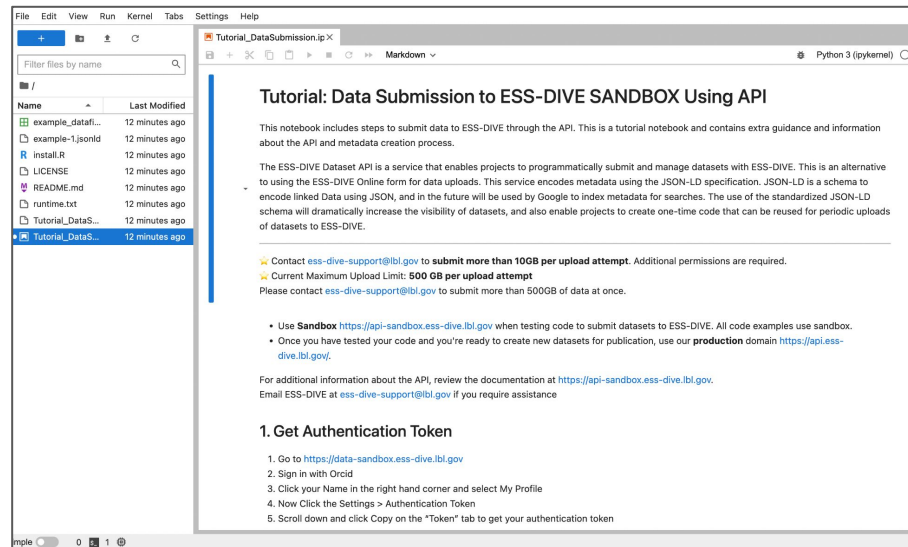
API Tutorials



<https://github.com/ess-dive/essdive-tutorials>

```
55 ## Dataset API Information and Token
56
57 You will need to copy your authentication token from your profile on ESS-DIVE. Tokens
58 expire *every 24 hours.*
59
60 ```{r setup}
61 token <- "<ENTER TOKEN HERE>"
62
63 # DO NOT EDIT
64 header_authorization <- paste("bearer", token, sep=" ")
65 endpoint <- "packages"
66
67
68 ## Submit a Dataset
69 ## Create Metadata
70
71 Due to R complex JSON-LD support limitations, you need to create a text file of your
72 JSON-LD and add it's directory in the following read_file function. Here's an example
73 for a JSON-LD located on our ESS-DIVE package service examples github repository
74 (https://github.com/ess-dive/essdive-package-service-examples).
75
76 While creating your metadata, refer to the Dataset Requirements page for instructions
77 on completing each metadata field:
78 https://docs.ess-dive.lbl.gov/contributing-data/package-level-metadata
79
80 To make sure your file is properly saved in the JSON-LD format, consider using the
81 Atom text editor (https://atom.io)
82
83 Once you have completed your metadata file, enter the path to replace the below
84 example.
85 1.1 API_CreateSubmit_Tutorial
```

Name	Size
example_datafile.csv	11 B
example-1.jsonld	6.5 KB
install.R	106 B
LICENSE	1.5 KB
README.md	2.2 KB
runtime.txt	17 B
Tutorial_DataSubmission_R.Rmd	5.3 KB
Tutorial_DataSubmission.ipynb	37.5 KB



Additional API Resources



Guide to Using ESS-DIVE

MANAGE DATA

Register Dataset Citations

Create Data Collections >

Link to External Data Sources

Manage Project Data

SEARCH & DOWNLOAD DATA

Search for Data

Download Data

Access Data Portals

Search & Download with API



PROGRAMMATIC TOOLS

ESS-DIVE Dataset API ✓

R Example

Python Example

Java Example

API Updates and Changes

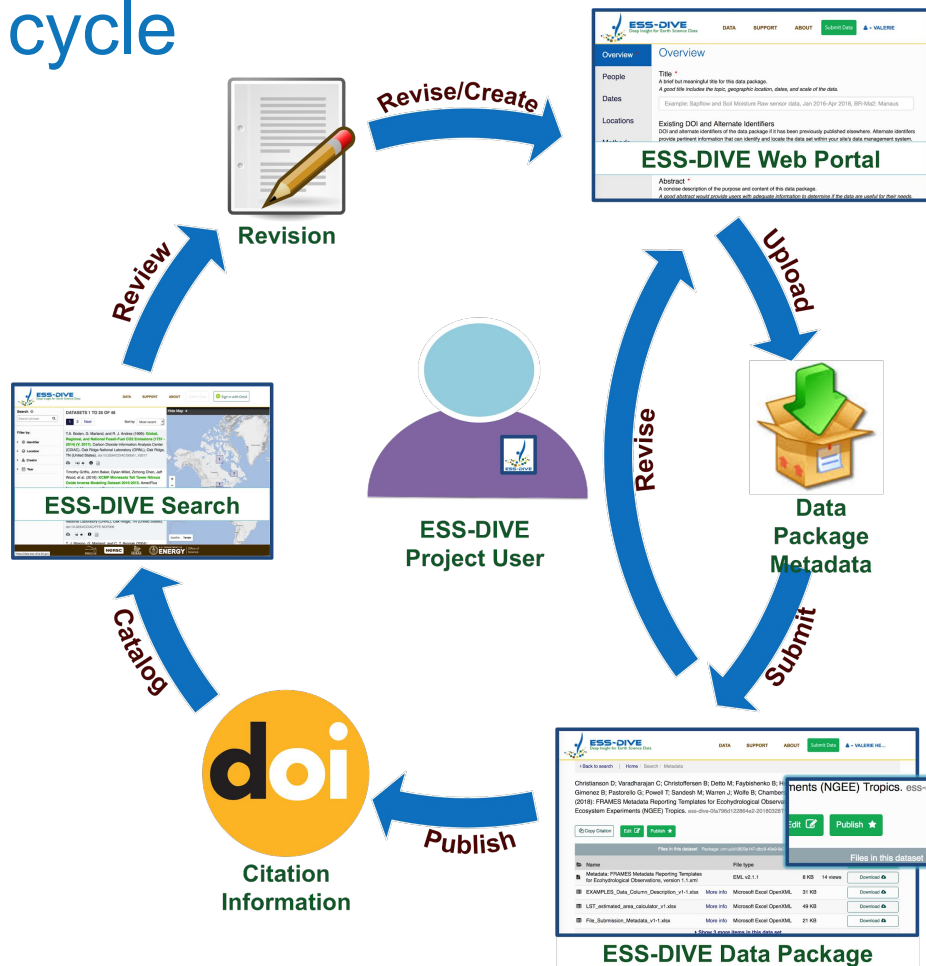
Dataset submission demos and examples:

- R
- Python
- Java

How-to guides for creating an Upload Script are also available on GitHub: [Coding Examples](#)

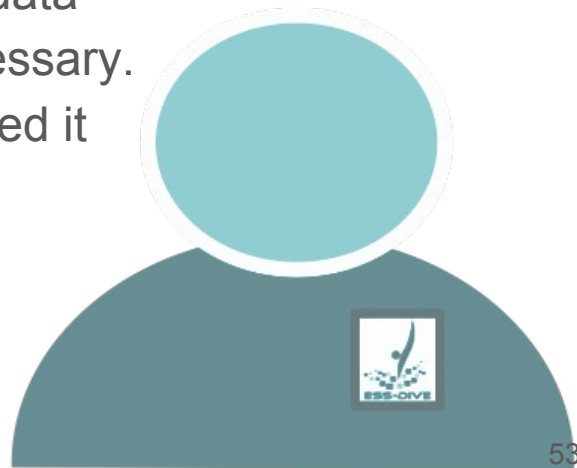
DATA PUBLICATION PROCESS

Publication cycle



What happens after you click *Publish*?

- **QUEUE** - Your publication request will enter the ESS-DIVE support queue.
- **CONFIRM** - ESS-DIVE support team will email you to confirm that your request has been received.
- **REVIEW** - ESS-DIVE support team will review your data package and email you with revision requests if necessary.
- **PUBLISH** - Once the data package has been reviewed it will be assigned a DOI and shared publicly.



What happens after you click *Publish*?

CONFIRM

You will receive an email from the ESS-DIVE support team confirming your request.

Hello,

We have received your request to Publish "Air temperature and relative humidity raw data from June 2017-Oct 2018 at the B34 tower in Manaus, Brazil" and will notify you when we have fully reviewed your data set. Note that the publication status will not prevent you from editing your data package.

Your data package will be published with an existing DOI, if you supplied one. Otherwise, a new DOI will be issued through the ESS-DIVE system.

If you did not want to request that your data be published, please reply to this e-mail and we will stop the publication process.

Thanks,

The ESS-DIVE Support Team

What happens after you click *Publish*?

REVIEW

After an initial review, a revision request may be sent over email.

Revision requests must be resolved before publication.

Hello,

We have finished reviewing your data package and request the following improvements to your metadata before publication:

1. Revise your abstract to include a clear and concise description of the contents of your data package. Describe the file types in your data package and any software needed to utilize them, if applicable. Also, include definitions of any acronyms used so your abstract can be understood by anyone and add a statement about the purpose for why these data were generated and the research question it is intended to answer.

Note that once the data package is published, it will be publicly available for search and download. The publication action cannot be undone, however, you will still be able to edit or retire the data package. As the dataset contact, you are responsible for obtaining consent for publication from the data package authors and notifying them about its status. **Please respond to this message once you are finished making these revisions so that we can continue the approval process.**

Thank you,

The ESS-DIVE Support Team

What happens after you click *Publish*?

PUBLISH

You will receive an email from the ESS-DIVE support team confirming published dataset.

Hello,

Your data package has been published. Go to <https://data.ess-dive.lbl.gov/datasets/doi:10.15485/1868939> to view.

Here is the citation with the DOI:

Newcomer M ; Rosemary C ; Williams K (2022): Machine Learning Assisted Gap-Filled Discharge Data for the East River Community Watershed, Colorado, for Water Years 2014-2021. Watershed Function SFA, ESS-DIVE repository. Dataset.
doi:10.15485/1868939 accessed via <https://data.ess-dive.lbl.gov/datasets/doi:10.15485/1868939> on 2022-05-20

You may make minor edits and corrections to the data package metadata and files. Any edits you submit now will be immediately made public on ESS-DIVE. For major revisions to a data package, you must create a new data package by clicking the "Submit Data" button.

Contact the ESS-DIVE Support Team ess-dive-support@lbl.gov if you need further information.

IMPROVING DATASET QUALITY

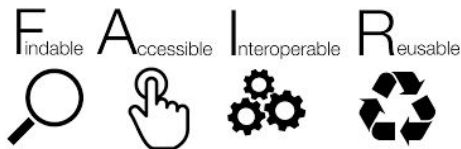
ESS-DIVE Reporting Formats

Scientific Benefit of Consistently Formatted Data



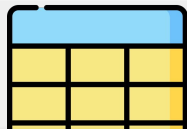
- Researchers can **find** data more easily in ESS-DIVE
- Data can be **reused** in synthesis research
- **Integrated search** that facilitates data interoperability

Benefits for data contributors, collaborators and project members, and data users.



13 ESS-DIVE Reporting Formats

Data Files



CSV Metadata

Velliquette, Heinz,
Devarakonda (ORNL)



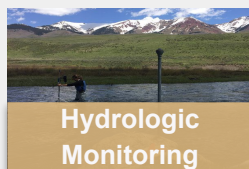
**Model Data
Archiving**
Simmonds (LBNL)



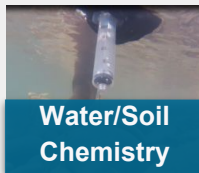
Soil Respiration
Bond-Lamberty,
Pennington (PNNL)



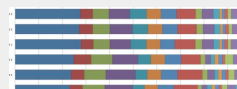
Leaf Physiology
Rogers, Ely (BNL)



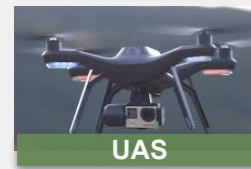
**Hydrologic
Monitoring**
Goldman (PNNL)



**Water/Soil
Chemistry**
Boye (SLAC)

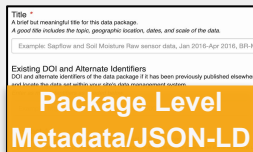


**Amplicon
Sequencing**
Weisenhorn (ANL)



UAS
Serbin, Ely (BNL)

Metadata



**Package Level
Metadata/JSON-LD**
Agarwal,
Hendrix (LBNL)



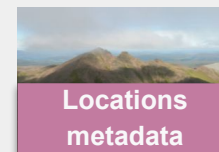
**Package Metadata
Quality**
Damerow (LBNL)



**File-level
Metadata**
Velliquette, Heinz,
Devarakonda (ORNL)



**Sample
IDs/Metadata**
Damerow (LBNL)



**Locations
metadata**
Crystal-Ornelas
(LBNL)

Crystal-Ornelas, R. et al. Enabling FAIR data in Earth and environmental science with community-centric (meta)data reporting formats. *Sci Data* 9, 700 (2022). <https://doi.org/10.1038/s41597-022-01606-w>

Providing File-Level Metadata



What are file-level metadata?

- Granular information at the data file level (e.g., file name & description, start and end dates)

Why provide file-level metadata?

- Data users will have general understanding of info contained within a file
- FLMD can enable automatic parsing of data files so that users can eventually search & locate files across data collections



Terri Velliquette



File-level metadata example

	A	B	C	D
1	File_Name	File_Description	Standard	UTC_offset
2	soil_samples_*.csv	15 soil samples taken in the summer of 2019 using small hand trowel and soil probe.	csv v1.0	- 5 hours
3	SoilPoreWaterHillslope2019.csv	50 soil pore water samples taken from the hillslope at the site over a one year period.	EPA	- 5 hours



- FLMD **template**:
<https://ess-dive.gitbook.io/file-level-metadata-reporting-format/>

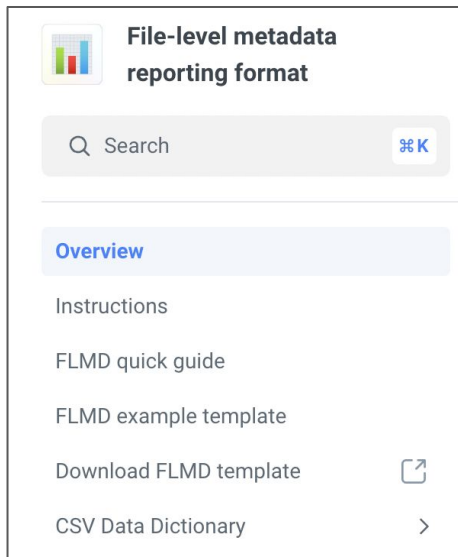


- Can use wildcard * to indicate when FLMD applies to multiple files

Reporting Format Resources



Instructions, examples,
and templates for
reporting formats
available on **GitBooks**



Reporting
Format Poster
Session C

Reporting format documentation on **GitHub**:

<https://github.com/ess-dive-community>

Reporting format documentation as **website**:

<https://docs.ess-dive.lbl.gov/contributing-data/data-reporting-formats>

Tools and support for dataset creation



Help Documentation

Refer to [ESS-DIVE's website](#) and [Gitbooks](#) for detailed information on dataset requirements.



Metadata Guide and Offline Template

Review our complete [Metadata Guidelines](#).

Collaborate on metadata with co-authors using an [offline template](#) before working on ESS-DIVE.



Sandbox Testing Server

Practice uploading data packages to our [sandbox test server](#), which does not permanently save data.



Support Email Service

Feel free to **contact the ESS-DIVE support team** with questions!

ess-dive-support@lbl.gov
ess-dive.lbl.gov/contact/

Questions?