

# 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-dive.lbl.gov>

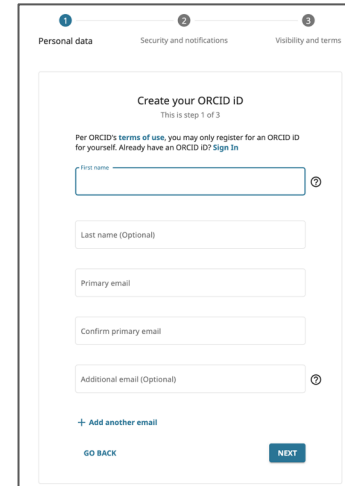
Type the following in the  
chat when you're done!

**"1 - <your ORCID>"**

# Create an ORCiD

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

<https://orcid.org/register>

A screenshot of the ORCID registration form, specifically the "Create your ORCID ID" step. The form is titled "Create your ORCID ID" and indicates it is "This is step 1 of 3". Below the title, there is a note: "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" (required, indicated by a red asterisk), "Last name (Optional)", "Primary email", "Confirm primary email", and "Additional email (Optional)" (indicated by a red asterisk). There is a link "+ Add another email" below the additional email field. At the bottom, there are two buttons: "GO BACK" and "NEXT". The form is part of a three-step process, with "Personal data" being the first step, "Security and notifications" being the second, and "Visibility and terms" being the third.

# Navigate to ESS-DIVE Sandbox

Sandbox is a test system where you can practice using any feature. 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](mailto:ess-dive-support@lbl.gov)



DATA

PORTALS

SUPPORT

ABOUT

SUBMIT DATA

 Sign in with Orcid

Search ?

DATASETS 1 TO 25 OF 42

Hide Map »

# Login with ORCiD account



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Need help? Email us at [ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.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

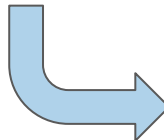
Goyet C ; Healy R ; Ryan J (2000): **Global Distribution of Total Inorganic Carbon and Total Alkalinity Below the Deepest Winter Mixed Layer Depths**. CDIAC, ESS-DIVE repository. Dataset. ess-dive-6708194c4c2b0b8-20210521T114856338040

Goyet C ; Key R M ; Sullivan K F ; Tsuchiya M (1997): **CO<sub>2</sub>, 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-486eff1b81566a4-20210521T114853386594

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 >

Map showing the distribution of datasets across the globe, with markers indicating locations. The map includes labels for continents and countries, and a legend for 'Satellite' and 'Terrain'.



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](mailto: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](mailto: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 <http://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**



# Project Data Management on ESS-DIVE

# Presenters



**Joan Damerow**

*Community Engagement Lead  
Scientist*



**Charuleka Varadharajan**

*ESS-DIVE co-PI*

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

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

## Have you used ESS-DIVE before?

Yes, I have stored data  
in ESS-DIVE before

Yes, I have downloaded  
data from ESS-DIVE

No, I have not logged  
into ESS-DIVE



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

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

# What is your primary role in your research group?

Field Scientist/Data Collector

Lab Scientist/Data Analyzer

PI

Data User

Data Manager



# What is a primary challenge that you have encountered in managing or publishing data?

Top



# Tutorial Overview



**Part 1:** About ESS-DIVE and Data Management Plans

**Part 2:** Learn how to use ESS-DIVE features for managing project data

Feedback on Project Data Management Features and Needs

*This session is designed for **data managers and ESS Project PIs***

# Lunch Tutorial and Posters

## UP NEXT: Creating and Publishing High-Quality Datasets

1:00 PM – 2:30 PM **ET** / 10:00 AM – 11:30 AM **PT**

Learn how to upload and publish data with ESS-DIVE as a new contributor in this hands-on training session. **Presenter:** Emily Robles



## *Posters*

ESS-DIVE Overview: A Scalable, User-focused Repository for Earth and Env Science Data **Presenter:** Shreyas Cholia



Community-developed (meta)data reporting formats to enable data reuse in ESS-DIVE, **Presenter:** Charu Varadharajan





# Including ESS-DIVE in your Data Management Plan



# What is ESS-DIVE?



Data Repository to

**preserve**

expand **access** to

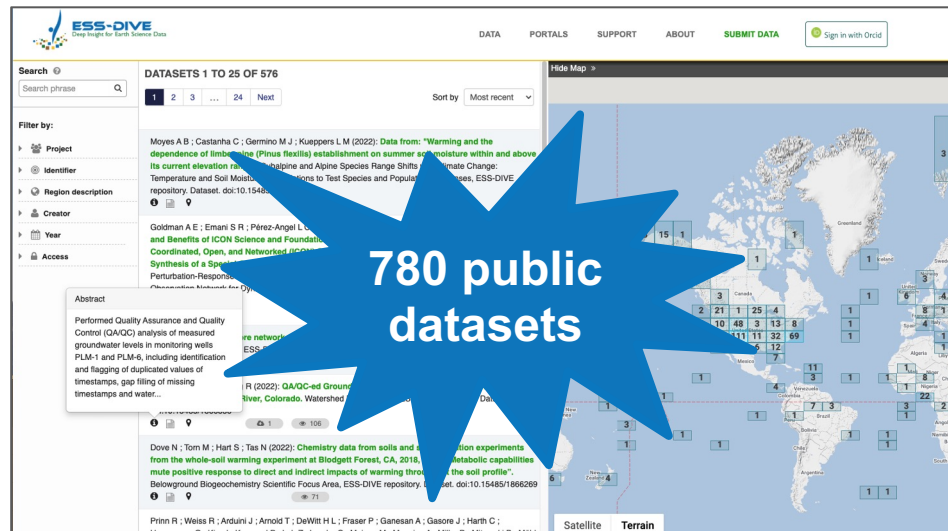
and improve **usability** of

**ESS data**

F<sub>indable</sub> A<sub>ccessible</sub> I<sub>nteroperable</sub> R<sub>eusable</sub>



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



Use of ESS-DIVE is **mandatory** for ESS project data management plans

# Who is eligible to store data with ESS-DIVE?



	ESS Program Funding	Other Funding Source
<b>Can I store data with ESS-DIVE?</b>	<b>Yes</b> , you can start storing data right away	<b>No</b> , you need to request permission to upload data to ESS-DIVE
<b>Rationale?</b>	All projects funded by the ESS program should store or mirror data on ESS-DIVE	Must provide rationale for why project data is relevant to ESS program
<b>How do I start storing data?</b>	Fill out <b>New Data Contributor</b> form	Fill out <b>New Project Request</b> form
<b>Proposals</b>	Review terms of use and include in DMP. No need for a letter of support.	Contact for permission to include in your proposal



**If your project request is approved** we will follow up with instructions on how to start uploading data

# Using ESS-DIVE in a Data Management Plan (DMP)



- Data Collected, Generated, or Used
- **Standards and reporting formats**
- **Data Sharing and Preservation**
- Related tools, software or code
- Data protection: Security and Integrity
- DMP Oversight
- Rationale for the proposed data management plan

**ESS-DIVE is DOE ESS's central location for long-term data preservation**

# DMP: Data Sharing and Preservation



- **ESS-DIVE provides**

- Storage of **diverse data** types
- Public release of data with digital object identifier (**DOI**)
  - Pre-publish DOIs may be available on request
  - **Citation** text for published data
- Long-term data **search and download** availability
- **Curation** of dataset metadata and basic file checks

- **ESS-DIVE does not provide**

- Enforcement of data publication timelines
- Guidance/obtaining permissions on what project data can be shared <sup>17</sup>

# Archiving data in multiple data repositories

**At minimum ESS projects need to store metadata on ESS-DIVE**

Options if you have data in other repositories:

- Replicate the **data and metadata** at ESS-DIVE and the other repository
- Replicate the **metadata** at ESS-DIVE and **link to the data** at the other repo
- Store the **data and metadata** in ESS-DIVE and **link to the data** ESS-DIVE from the other repository
- Use the same or a different **DOIs**

# DMP: Data and metadata standards



- **ESS-DIVE provides**
  - **Metadata standards** for data packages
  - Community **reporting formats** for several ESS data and metadata types
  - Basic **guidance for organizing** data packages and authorship
  - **Checks** of metadata quality (FAIR scores) and that files are readable
- **ESS-DIVE does not provide**
  - Project is expected to provide data formatting and quality checking.  
Include **data reporting formats** early in your scientific workflows

# Using ESS-DIVE for your project: Terms of Use



**Step 1:** Register as a new data contributor (<https://docs.ess-dive.lbl.gov/new-user-registration>)

**Step 2:** Submit data in relevant community standards and apply QA/QC

**Step 3:** Provide data package documentation & appropriate standardized metadata

**Step 4:** Agree to the data contributor license (Part B) for serving data to the public.

**ESS-DIVE supports Creative Commons Attribution 4.0 and Creative Commons Public Domain policies for data usage rights**



# **NEW** Project Data Management Features

# Overview of Data Management Features

## **\*NEW\* Project Data Management Features**

Manage project information, data managers, and teams

## **Dataset Sharing**

Collaborate on a single dataset

## **Data Portals**

Create a collection of datasets

## **External Linking**

Link to other repos and data systems

# Overview of **NEW** Data Management Features



These project management features are **not set up by default** for projects.  
Pls must initiate the process.

We will describe what these features are and learn hands-on how to set them up:

1. ESS-DIVE's Project List
2. Project Data Manager Role
3. My Projects
4. Teams

## **Additional Resources:**

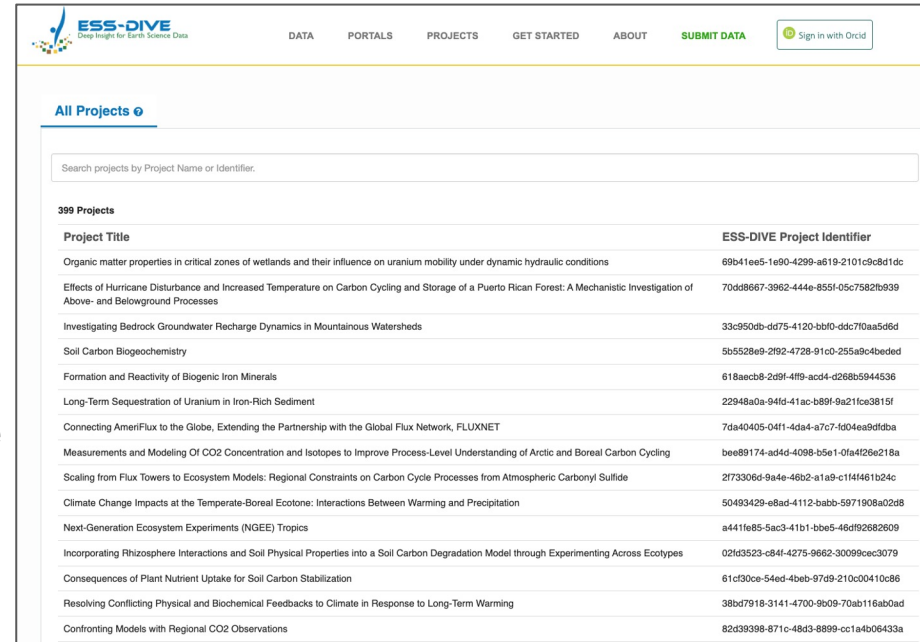
Webinar June 26, 10-11 am PT

[Project Data Management  
documentation](#)

# ESS-DIVE's Project List

Is a searchable list of all project's **approved to publish data** on ESS-DIVE.

- Search for project's by **title**, **PI**, or **identifier**
  - Must login to view and search by PI name
- Look-up project identifiers when **submitting datasets with the API**



The screenshot shows the ESS-DIVE website's 'All Projects' page. It features a search bar at the top with the placeholder text 'Search projects by Project Name or Identifier.' Below the search bar, it indicates '399 Projects'. A table lists various projects with their titles and corresponding ESS-DIVE Project Identifiers. The table is partially visible, showing the first 15 projects.

Project Title	ESS-DIVE Project Identifier
Organic matter properties in critical zones of wetlands and their influence on uranium mobility under dynamic hydraulic conditions	69b41ee5-1e90-4299-a619-2101c9c8d1dc
Effects of Hurricane Disturbance and Increased Temperature on Carbon Cycling and Storage of a Puerto Rican Forest: A Mechanistic Investigation of Above- and Belowground Processes	70dd8667-3962-444e-855f-05c7582fb939
Investigating Bedrock Groundwater Recharge Dynamics in Mountainous Watersheds	33c950db-dd75-4120-bb70-ddc770aa5d6d
Soil Carbon Biogeochemistry	5b5528e9-2f92-4728-91c0-255a9c4beded
Formation and Reactivity of Biogenic Iron Minerals	618aecb8-2d9f-4f9f-acd4-d268b5944536
Long-Term Sequestration of Uranium in Iron-Rich Sediment	22948a0a-94fd-41ac-b89f-9a21ce3815f
Connecting AmeriFlux to the Globe, Extending the Partnership with the Global Flux Network, FLUXNET	7da40405-04f1-4da4-a7c7-f0d4ea9df5ba
Measurements and Modeling Of CO2 Concentration and Isotopes to Improve Process-Level Understanding of Arctic and Boreal Carbon Cycling	bee89174-ad4d-4098-b5e1-0fa4f26e218a
Scaling from Flux Towers to Ecosystem Models: Regional Constraints on Carbon Cycle Processes from Atmospheric Carbonyl Sulfide	27f306d-9a4e-4802-a1a9-c1f4f461b24c
Climate Change Impacts at the Temperate-Boreal Ecotone: Interactions Between Warming and Precipitation	50493429-e8ad-4112-babb-5971908a02d8
Next-Generation Ecosystem Experiments (NGEE) Tropics	a441fe85-5ac3-41b1-bbe5-46d92682609
Incorporating Rhizosphere Interactions and Soil Physical Properties into a Soil Carbon Degradation Model through Experimenting Across Ecotypes	02d3523-c84f-4275-9662-30099cec3079
Consequences of Plant Nutrient Uptake for Soil Carbon Stabilization	61cf30ce-54ed-4beb-97d9-210c00410c86
Resolving Conflicting Physical and Biochemical Feedbacks to Climate in Response to Long-Term Warming	38bd7918-3141-4700-9b09-70ab116ab0ad
Confronting Models with Regional CO2 Observations	82d39398-871c-48d3-8899-cc1a4b06433a

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

# ESS-DIVE's Project List

This list does away with inconsistent project titles and provides a controlled list with **unique identifiers** to ensure your **dataset citations are consistent** within ESS-DIVE.

**Your project must be on this list** before you can submit data

- **ESS** Projects are approved by default
- **Non-ESS** projects are added once approved by ESS program

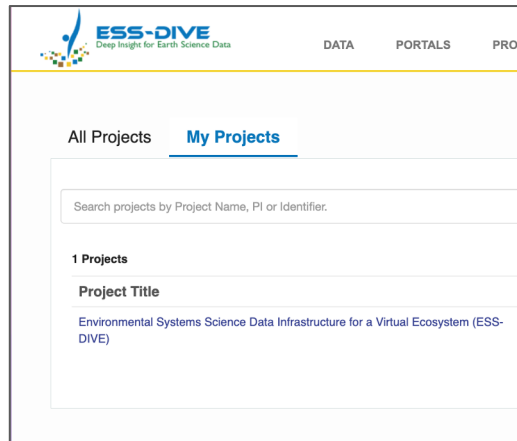


# Project Data Managers

A project data manager **is a role** in ESS-DIVE that enables you to **access** project information and teams.



Become a project manager



Gain access to your project page



Create teams for your project

# Project Data Managers

Assigning project data managers for your project is an important starting point to leverage ESS-DIVE's growing suite of project management tools

## Who can become a project manager?

- **PIs** have automatic approval to become project managers
- **Any other project member** must first be approved by their PI

If you are on multiple projects, you will need to be assigned project manager for each project.

# Last Call

## ESS-DIVE Tutorial Preparation

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Sign in to Sandbox

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Type the following in the  
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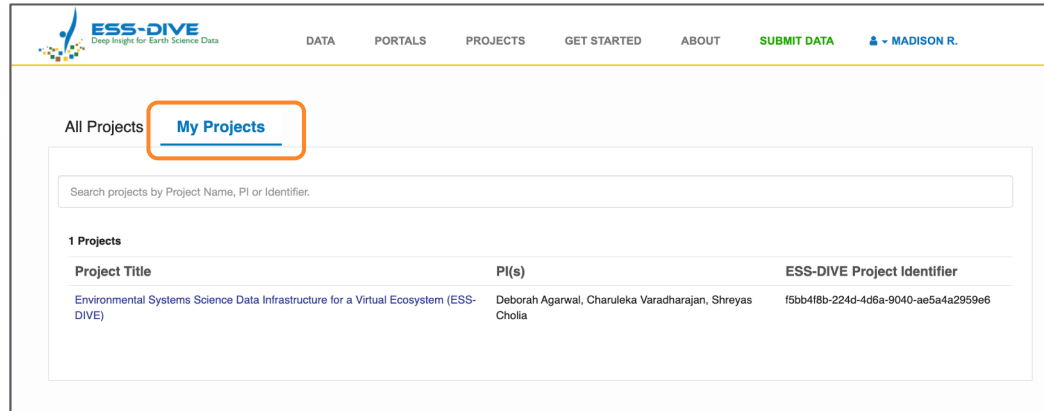
**"1 - <your ORCID>"**



# My Projects

Lists **all projects you can access** as a project data manager

- The “My Projects” page is only visible to project managers
- Access additional features from this page by selecting a project

A screenshot of the ESS-DIVE web application. The top navigation bar includes the ESS-DIVE logo, the tagline "Deep Insights for Earth Science Data", and links for DATA, PORTALS, PROJECTS, GET STARTED, ABOUT, SUBMIT DATA, and a user profile for MADISON R. Below the navigation bar, there are two tabs: "All Projects" and "My Projects", with "My Projects" selected and highlighted by an orange box. A search bar is present with the placeholder text "Search projects by Project Name, PI or Identifier." Below the search bar, a section titled "1 Projects" contains a table with the following data:

Project Title	PI(s)	ESS-DIVE Project Identifier
Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE)	Deborah Agarwal, Charuleka Varadharajan, Shreyas Cholia	f5bb4f8b-224d-4d6a-9040-ae5a4a2959e6

This is a quick way to check if you are a project manager on any projects!

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

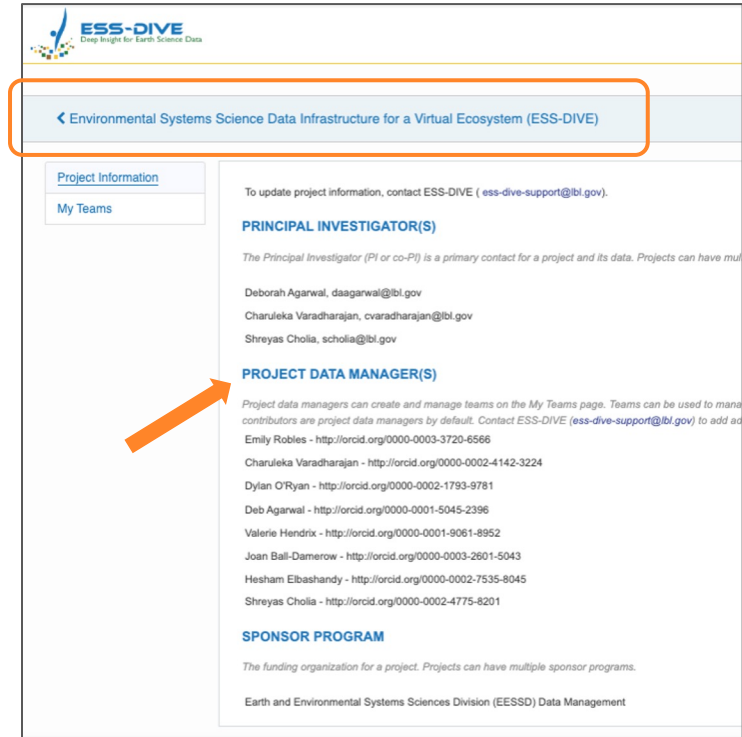
# Project Information

After selecting a project, you'll be directed to the project information page.

This page lists **important metadata** about your project:

- Principal Investigator(s)
- Project Data Managers
- Sponsor Program

Use this to review who has project manager access to your project!

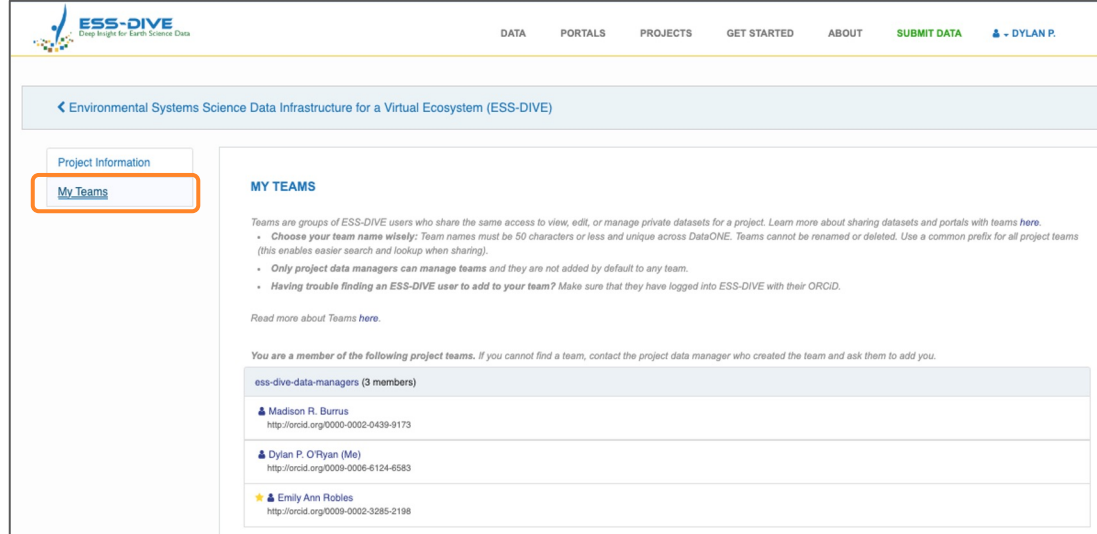
A screenshot of the ESS-DIVE Project Information page. The page header includes the ESS-DIVE logo and the text "Deep Insights for Earth Science Data". A blue navigation bar contains the text "< Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE)". Below this, a sidebar on the left has two links: "Project Information" (highlighted with a blue box) and "My Teams". The main content area on the right is titled "Project Information" and contains the following sections: "To update project information, contact ESS-DIVE (ess-dive-support@lbl.gov).", "PRINCIPAL INVESTIGATOR(S)" with a subtext "The Principal Investigator (PI or co-PI) is a primary contact for a project and its data. Projects can have multiple Principal Investigators.", a list of three Principal Investigators with their names and email addresses, "PROJECT DATA MANAGER(S)" with a subtext "Project data managers can create and manage teams on the My Teams page. Teams can be used to manage project data managers by default. Contact ESS-DIVE (ess-dive-support@lbl.gov) to add additional project data managers.", a list of seven Project Data Managers with their names and ORCID IDs, "SPONSOR PROGRAM" with a subtext "The funding organization for a project. Projects can have multiple sponsor programs.", and a footer "Earth and Environmental Systems Sciences Division (EESDD) Data Management". An orange arrow points to the "PROJECT DATA MANAGER(S)" section.

# My Teams

Select the My Teams tab to:

- **View** teams you are a member of
- **Create** teams for your project
- **Manage** team members

Projects can have multiple teams.  
If you are **not a member** of a team, you **won't be able to view** that team.

A screenshot of the ESS-DIVE web application interface. The top navigation bar includes links for DATA, PORTALS, PROJECTS, GET STARTED, ABOUT, and a green SUBMIT DATA button. A user profile icon for "DYLAN P." is on the right. Below the navigation bar, a light blue banner reads "Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE)". On the left, a sidebar contains two tabs: "Project Information" and "My Teams", with the latter highlighted by an orange rectangle. The main content area is titled "MY TEAMS" and contains explanatory text about team management, a list of bullet points, and a link to "Read more about Teams here". Below this, a section titled "You are a member of the following project teams. If you cannot find a team, contact the project data manager who created the team and ask them to add you." lists three team members: "ess-dive-data-managers (3 members)", "Madison R. Burus" (with ORCID and URL), "Dylan P. O'Riyan (Me)" (with ORCID and URL), and "Emily Ann Robles" (with ORCID and URL).

Project managers cannot view all project teams  
unless they are added to all teams





# What are teams?

Teams are groups of ESS-DIVE users.

The **purpose** of teams is to provide a way to **share data permissions** with a group of people at once and support collaboration.

What can teams be used for?

- **Data managers** who need to **manage** project dataset permissions and publication
- **Collaborators** who need to **edit** the same datasets together
- **Reviewers** who need to **view** private datasets

ess-dive-data-managers (3 members)	
	Madison R. Burrus (Me) <a href="http://orcid.org/0000-0002-0439-9173">http://orcid.org/0000-0002-0439-9173</a>
	Dylan P. O'Ryan <a href="http://orcid.org/0009-0006-6124-6583">http://orcid.org/0009-0006-6124-6583</a>
 	Emily Ann Robles <a href="http://orcid.org/0009-0002-3285-2198">http://orcid.org/0009-0002-3285-2198</a>

*Example of a team*

PROJECT DATA MANAGER(S)	
Project data managers can create and manage teams on the My Teams page. Teams can be contributors are project data managers by default. Contact ESS-DIVE ( <a href="mailto:ess-dive-support@lbl.gov">ess-dive-support@lbl.gov</a> )	
Emily Robles - <a href="http://orcid.org/0000-0003-3720-6566">http://orcid.org/0000-0003-3720-6566</a>	
Charuleka Varadharajan - <a href="http://orcid.org/0000-0002-4142-3224">http://orcid.org/0000-0002-4142-3224</a>	
Dylan O'Ryan - <a href="http://orcid.org/0000-0002-1793-9781">http://orcid.org/0000-0002-1793-9781</a>	
Deb Agarwal - <a href="http://orcid.org/0000-0001-5045-2396">http://orcid.org/0000-0001-5045-2396</a>	
Valerie Hendrix - <a href="http://orcid.org/0000-0001-9061-8952">http://orcid.org/0000-0001-9061-8952</a>	
Joan Ball-Damerow - <a href="http://orcid.org/0000-0003-2601-5043">http://orcid.org/0000-0003-2601-5043</a>	
Hesham Elbashandy - <a href="http://orcid.org/0000-0002-7535-8045">http://orcid.org/0000-0002-7535-8045</a>	
Shreyas Cholia - <a href="http://orcid.org/0000-0002-4775-8201">http://orcid.org/0000-0002-4775-8201</a>	

*Project managers is not a team and does not behave like a team*

# Overview of Roles on ESS-DIVE



## ESS-DIVE User

Someone who logged into ESS-DIVE using their ORCID.



## Data Contributor

An ESS-DIVE user who was approved by ESS-DIVE to upload data; they can create, edit, and publish datasets.



## NEW: Project Data Manager

A data contributor approved by a project PI to create and manage teams for that project.



## NEW: Team

A group of ESS-DIVE users who share access permissions to datasets and data portals.

# Time to practice!

## Set up Project Management

**Project management features are not set up by default for any project.  
PIs must initiate the process.**

The hands-on tutorial section is designed **to help PIs get started**. We will learn how to set up and use each of the four features we discussed.

# Time to practice!

## Set up Project Management

### On ESS-DIVE Sandbox

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DATASETS 1 TO 25 OF 42

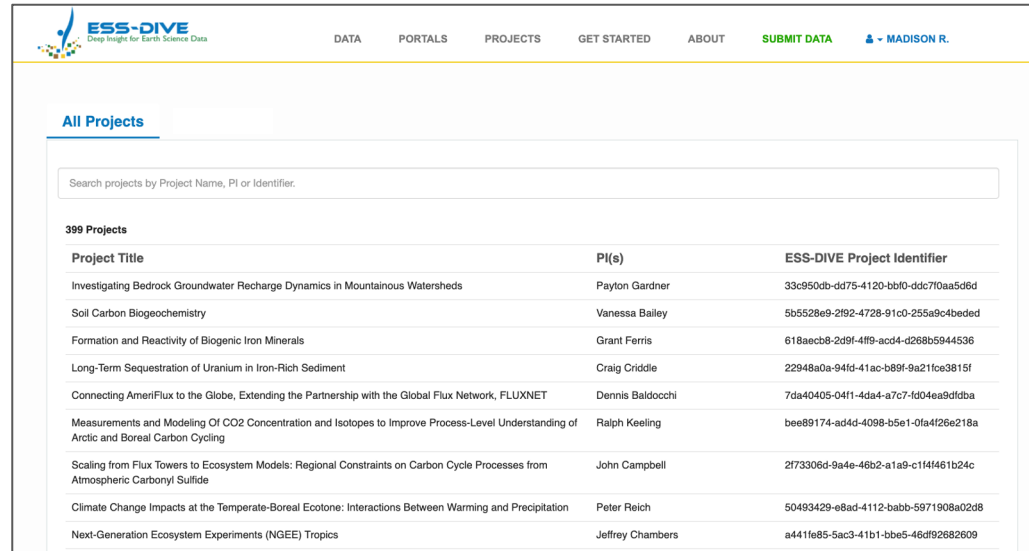
Hide Map »

# Step 1: Ensure project information is accurate

**Project information may change over time.** The default project information provided to ESS-DIVE is when the funding was awarded.

Use the project list to:

- ✓ **Verify** that your project is in ESS-DIVE's Project List and approved to store data
- ✓ **Review** the project title and PI info used in dataset citations
- ✓ **Contact** ESS-DIVE if you need to update any project information [ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.gov)



The screenshot shows the ESS-DIVE website's 'All Projects' page. It features a search bar at the top and a table listing 399 projects. The table has three columns: Project Title, PI(s), and ESS-DIVE Project Identifier. The first few rows of the table are as follows:

Project Title	PI(s)	ESS-DIVE Project Identifier
Investigating Bedrock Groundwater Recharge Dynamics in Mountainous Watersheds	Payton Gardner	33c950db-d75-4120-bb0-ddc7f0aa5d6d
Soil Carbon Biogeochemistry	Vanessa Bailey	5b5528e9-2f92-4728-91c0-255a9c4beded
Formation and Reactivity of Biogenic Iron Minerals	Grant Ferris	618aecb8-2d9f-4f89-acd4-d268b5944536
Long-Term Sequestration of Uranium in Iron-Rich Sediment	Craig Criddle	22948a0a-94fd-41ac-b89f-9a21fce3815f
Connecting AmeriFlux to the Globe, Extending the Partnership with the Global Flux Network, FLUXNET	Dennis Baldocchi	7da40405-04f1-4da4-a7c7-fd04ea9dfdba
Measurements and Modeling Of CO2 Concentration and Isotopes to Improve Process-Level Understanding of Arctic and Boreal Carbon Cycling	Ralph Keeling	bee89174-ad4d-4098-b5e1-0fa4f26e218a
Scaling from Flux Towers to Ecosystem Models: Regional Constraints on Carbon Cycle Processes from Atmospheric Carbonyl Sulfide	John Campbell	2f73306d-9a4e-46b2-a1a9-c1f4f461b24c
Climate Change Impacts at the Temperate-Boreal Ecotone: Interactions Between Warming and Precipitation	Peter Reich	50493429-e8ad-4112-babb-5971908a02d8
Next-Generation Ecosystem Experiments (NGEE) Tropics	Jeffrey Chambers	a441fe85-5ac3-41b1-bbe5-46df92682609

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



# Step 2: Become a Project Data Manager



## During the tutorial:

- We're using **Sandbox**
- Quick and **approval isn't necessary!**
- **Same process** for everyone
- We will be assigned to a **test project** called "ESS PI Meeting 2023 Project"
- Everyone who entered a "1" in the chat has already been assigned as a project data manager **to the test project**

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

## After the tutorial:

- You'll use **ESS-DIVE's main repository**
- **PI approval required** and may take time
- PIs have a **different process** than other project members
- You'll be assigned to your real project

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

# Step 2: Become a Project Data Manager on ESS-DIVE



Let the ESS-DIVE Team know who should have permission to manage your project.

- **PIs and Co-PIs:**
  - ✓ Register as a data contributor
  - ✓ Notify ESS-DIVE Support
- **All other members of project:**
  - ✓ PI must fill out the [Add Project Manager form](#) to grant you approval
  - ✓ Register as a data contributor

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

### Add Project Data Managers

Fill out this form to tell the ESS-DIVE team who the data managers are for your project data on ESS-DIVE. It is not necessary for PIs to submit this form for themselves or for other PIs on your project; all PIs will become project data managers by default\*.

A project data manager on ESS-DIVE is someone who can manage access to project data, review and update project information, and create teams of project members.

*\*PIs must first register as an ESS-DIVE data contributors in order for the ESS-DIVE team to give them default data manager permission on a project.*

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

Not shared

*\* Indicates required question*

**Project ID \***

Please search for your project in ESS-DIVE's project list and copy the project identifier here: <https://data.ess-dive.lbl.gov/projects>  
Expected format: f5bb4f8b-224d-4d6a-9040-ae5a4a2959e6

Your answer

# Step 2: Become a Project Data Manager on ESS-DIVE



Let the ESS-DIVE Team know who should have permission to manage your project.

- **PIs and Co-PIs:**  
**Good News!** Any PI who registered as a data contributor by May 5th **is already a Project Data Manager** on their project.

We recommend continuing the tutorial on Sandbox, but you have the option to use our **main data repository**: <https://data.ess-dive.lbl.gov>

### Add Project Data Managers

Fill out this form to tell the ESS-DIVE team who the data managers are for your project data on ESS-DIVE. It is not necessary for PIs to submit this form for themselves or for other PIs on your project; all PIs will become project data managers by default\*.

A project data manager on ESS-DIVE is someone who can manage access to project data, review and update project information, and create teams of project members.

*\*PIs must first register as an ESS-DIVE data contributors in order for the ESS-DIVE team to give them default data manager permission on a project.*

mburru@lbl.gov

Switch account

Not shared

*\* Indicates required question*

Project ID \*

Please search for your project in ESS-DIVE's project list and copy the project identifier here: <https://data.ess-dive.lbl.gov/projects>

Expected format: f5bb4f8b-224d-4d6a-9040-ae5a4a2959e6

Your answer

## Step 2: Become a Project Data Manager on Sandbox

Confirm that you are a project manager on the **tutorial test project**:

- ✓ Login to Sandbox
- ✓ Navigate to the project list
- ✓ Select “My Projects” and look for “ESS PI Meeting 2023 Project”

**Don't see the “My Projects” tab?** Type a “0” in the chat and our team will try to add you if there's time

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

## Step 3: Visit your Project Page

From the “My Projects” page, select  
“ESS PI Meeting 2023 Project”

Use your project page to:

- ✓ **Confirm** who your project data managers are
- ✓ **Access** teams page

[← Environmental Systems Science Data Infrastructure for a Virtual Ecosystem \(ESS-DIVE\)](#)

[Project Information](#)  
[My Teams](#)

To update project information, contact ESS-DIVE ([ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.gov)).

### PRINCIPAL INVESTIGATOR(S)

*The Principal Investigator (PI or co-PI) is a primary contact for a project and its data.*

Deborah Agarwal, [daagarwal@lbl.gov](mailto:daagarwal@lbl.gov)  
Charuleka Varadharajan, [cvaradharajan@lbl.gov](mailto:cvaradharajan@lbl.gov)  
Shreyas Cholia, [scholia@lbl.gov](mailto:scholia@lbl.gov)

### PROJECT DATA MANAGER(S)

*Project data managers can create and manage teams on the My Teams page. Team contributors are project data managers by default. Contact ESS-DIVE ([ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.gov)).*

Emily Robles - <http://orcid.org/0000-0003-3720-6566>  
Charuleka Varadharajan - <http://orcid.org/0000-0002-4142-3224>  
Dylan O’Ryan - <http://orcid.org/0000-0002-1793-9781>  
Deb Agarwal - <http://orcid.org/0000-0001-5045-2396>  
Valerie Hendrix - <http://orcid.org/0000-0001-9061-8952>  
Joan Ball-Damerow - <http://orcid.org/0000-0003-2601-5043>

## Step 4: Create a Team for your Project

Creating a team involves 3 important components:

- ✓ Consider **who you want** to be on the team and **what the team for**
- ✓ Carefully choose a **team name**
- ✓ Choose which team members should **co-own your team**

**Using Sandbox to create test teams first** may help your project figure out how you want to use teams!

## Step 4: Create a Team for your Project

### What can teams be used for?

You may be interested in creating teams if you have ever wanted to have groups of:

- **Data managers** who need to **manage** project dataset permissions and publication
- **Collaborators** who need to **edit** the same datasets together
- **Reviewers** who need to **view** private datasets

**Who can I add to a team?** Anyone who has logged into ESS-DIVE with their ORCID

# Step 4: Create a Team for your Project

## Why do we need to be careful with team names?

Teams cannot be deleted or renamed later

### ESS-DIVE's recommendations for naming teams:

- Use common **prefix** for all teams in your project
- Use the intended purpose or access level\* as **suffix**
- Have a team just for project data managers

#### Team Name Examples

ess-dive-view  
ess-dive-edit  
ess-dive-reviewers  
ess-dive-admin  
ess-dive-data-managers

*\*Access levels will be discussed in the Sharing Data section of this tutorial*

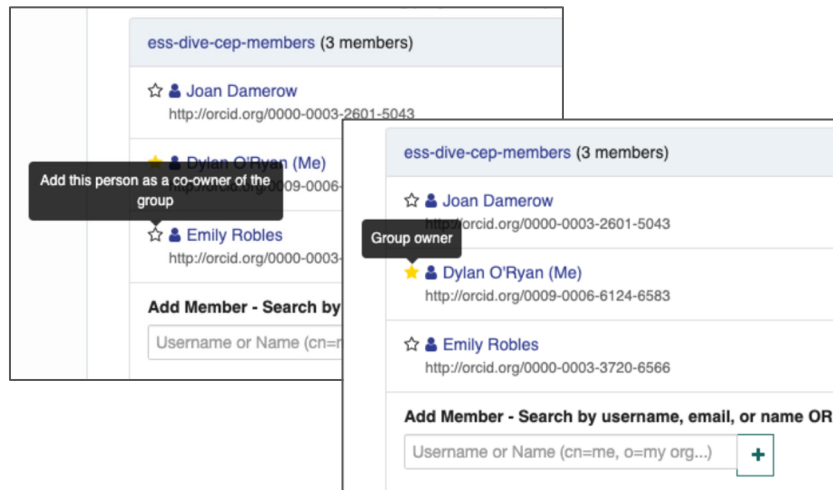


# Step 4: Create a Team for your Project

## Why choose team co-owners?

Co-owners can add and remove team members over time as people enter or leave your project to determine who should access team datasets

- The project manager who created the team is **the only team owner at first**
- **Add at least one co-owner** after creating a team by **starring** their name



ess-dive-cep-members (3 members)

- ☆ Joan Damerow  
http://orcid.org/0000-0003-2601-5043
- ★ Dylan O'Ryan (Me)  
http://orcid.org/0009-0006-6124-6583
- ☆ Emily Robles  
http://orcid.org/0000-0003-3720-6566

Add Member - Search by  
Username or Name (cn=me, o=my org...)

ess-dive-cep-members (3 members)

- ☆ Joan Damerow  
http://orcid.org/0000-0003-2601-5043
- ★ Dylan O'Ryan (Me)  
http://orcid.org/0009-0006-6124-6583
- ☆ Emily Robles  
http://orcid.org/0000-0003-3720-6566

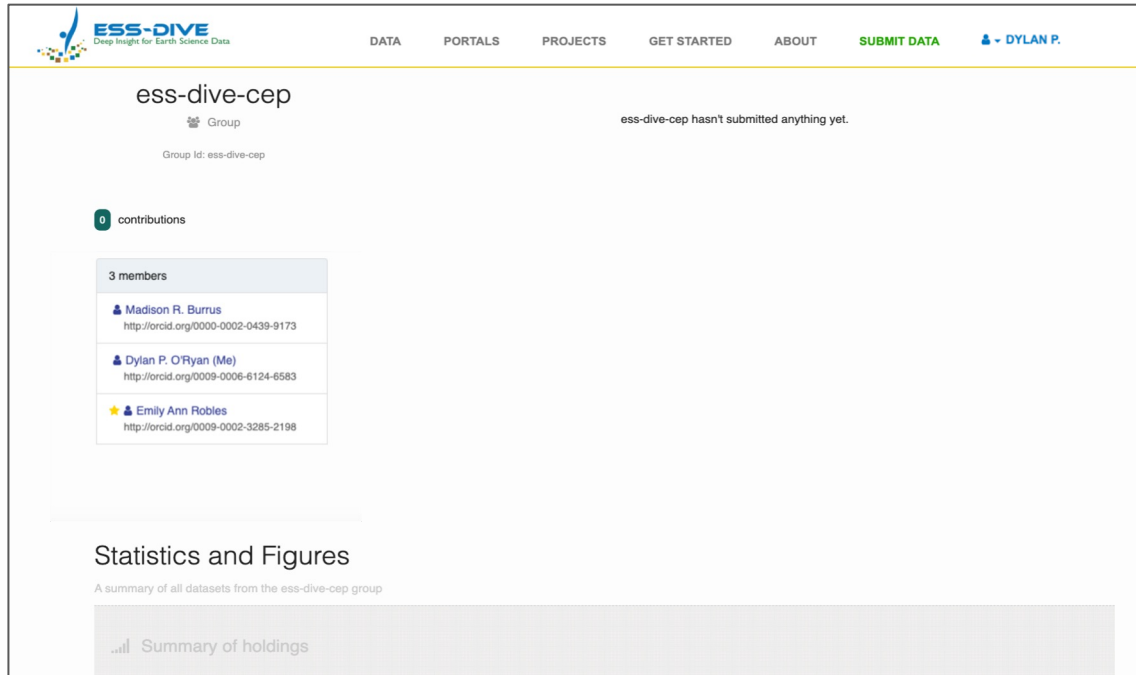
Add Member - Search by username, email, or name OR  
Username or Name (cn=me, o=my org...) +

# Step 4: Create a Team for your Project

## All teams have a profile

Profiles are used to view:

- **Team members**
- **Datasets shared** with that team
- **Cumulative metrics** of datasets shared with that team

A screenshot of the ESS-DIVE website showing the profile for the 'ess-dive-cep' group. The page has a navigation bar at the top with links: DATA, PORTALS, PROJECTS, GET STARTED, ABOUT, SUBMIT DATA, and a user profile for DYLAN P. The main content area shows the group name 'ess-dive-cep', a group icon, and the group ID 'ess-dive-cep'. It indicates that the group hasn't submitted anything yet and has 0 contributions. A section titled '3 members' lists three team members: Madison R. Burrus, Dylan P. O'Riyan (Me), and Emily Ann Robles, each with their ORCID ID. Below this is a section titled 'Statistics and Figures' with a subtitle 'A summary of all datasets from the ess-dive-cep group' and a placeholder for a 'Summary of holdings' chart.

# Step 4: Create a Team for your Project

## Time to create a team!

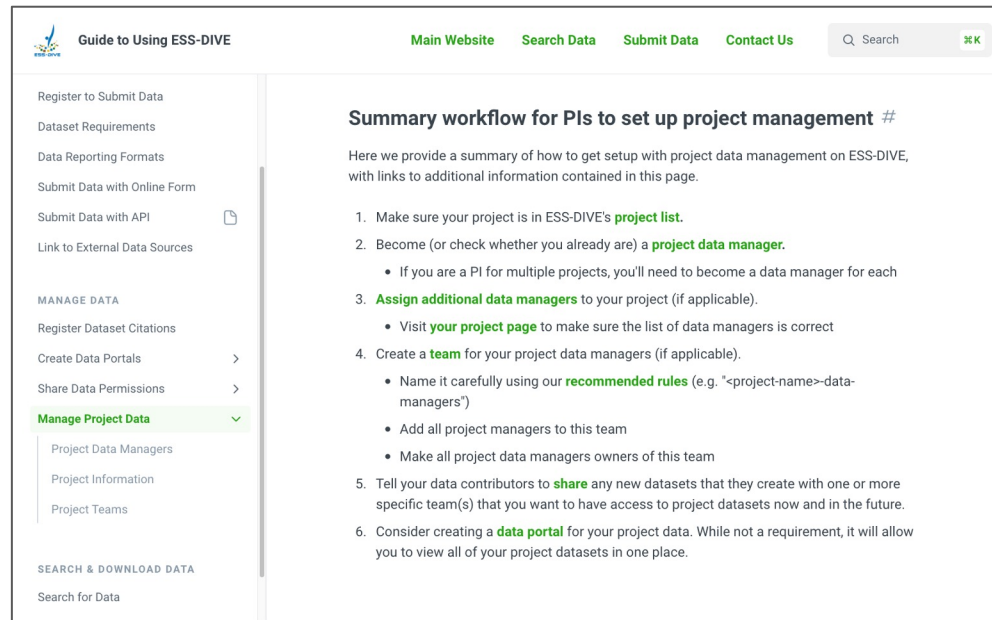
1. Select the My Teams page
2. Click the **“+ Add Team”** button at the bottom of the page
3. **Carefully** choose a team name  
*Reminder: teams cannot be deleted or renamed later*
4. Search for **team members** by name or ORCID to add them
5. Select **“Create Team”**
6. A green pop-up message will appear, click the **View it Now** link to visit the team profile and ensure your team was successfully created
7. **Return** to your My Teams page
8. Add at least one **co-owner**

To enable full visibility and access to teams for project managers:  
**Add** and **star all project managers** on every team you create

# Review the project management set up steps

You can review these steps at any time in our documentation

1. Ensure project information is accurate
2. Assign project data managers
3. Visit your project page
4. Create a team for your project

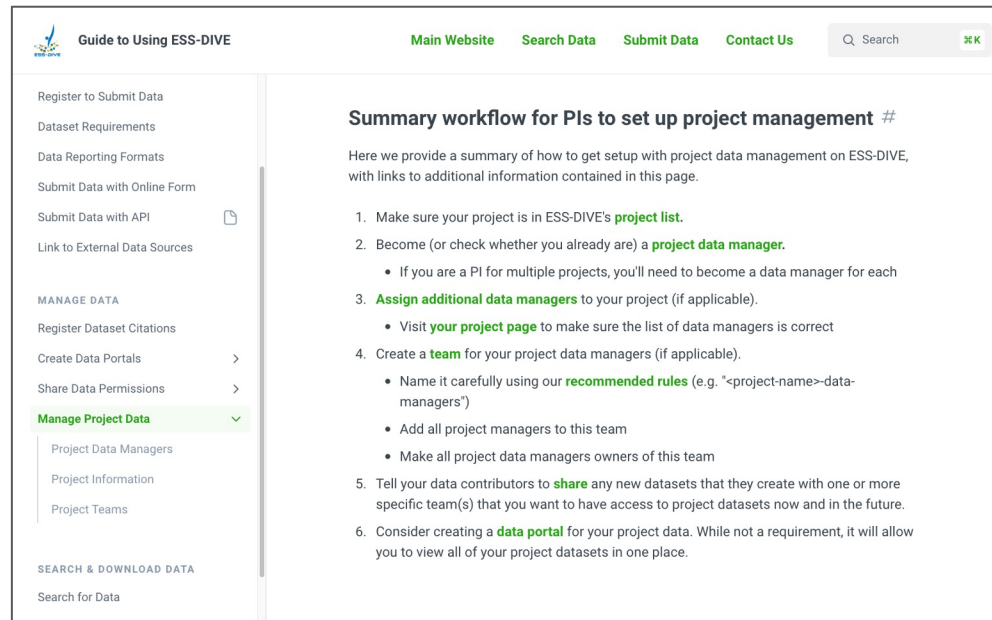
The screenshot shows a web page titled "Guide to Using ESS-DIVE". The page has a navigation bar with links: "Main Website", "Search Data", "Submit Data", and "Contact Us". There is also a search bar with a magnifying glass icon and a "Search" button. The main content area is divided into two columns. The left column is a sidebar with a list of links: "Register to Submit Data", "Dataset Requirements", "Data Reporting Formats", "Submit Data with Online Form", "Submit Data with API", "Link to External Data Sources", "MANAGE DATA", "Register Dataset Citations", "Create Data Portals", "Share Data Permissions", "Manage Project Data" (highlighted with a green background and a dropdown arrow), "Project Data Managers", "Project Information", "Project Teams", "SEARCH & DOWNLOAD DATA", and "Search for Data". The right column contains the main content, which is titled "Summary workflow for PIs to set up project management #". Below the title, there is a paragraph: "Here we provide a summary of how to get setup with project data management on ESS-DIVE, with links to additional information contained in this page." followed by a numbered list of six steps: 1. Make sure your project is in ESS-DIVE's project list. 2. Become (or check whether you already are) a project data manager. 3. Assign additional data managers to your project (if applicable). 4. Create a team for your project data managers (if applicable). 5. Tell your data contributors to share any new datasets that they create with one or more specific team(s) that you want to have access to project datasets now and in the future. 6. Consider creating a data portal for your project data. While not a requirement, it will allow you to view all of your project datasets in one place.

<https://docs.ess-dive.lbl.gov/manage-data/manage-project-data>

# Review the project management set up steps

You can review these steps at any time in our documentation

Please keep in mind that if you used **Sandbox** for this tutorial, **you will need to repeat these steps on ESS-DIVE's main data repository**

A screenshot of the ESS-DIVE documentation website. The page title is "Guide to Using ESS-DIVE". The navigation bar includes links for "Main Website", "Search Data", "Submit Data", and "Contact Us", along with a search bar. The left sidebar lists various sections: "Register to Submit Data", "Dataset Requirements", "Data Reporting Formats", "Submit Data with Online Form", "Submit Data with API", "Link to External Data Sources", "MANAGE DATA" (with sub-items: "Register Dataset Citations", "Create Data Portals", "Share Data Permissions", "Manage Project Data" (highlighted with a green bar and a dropdown arrow), "Project Data Managers", "Project Information", "Project Teams"), "SEARCH & DOWNLOAD DATA", and "Search for Data". The main content area is titled "Summary workflow for PIs to set up project management #" and contains a list of six steps for setting up project management, including making sure the project is in the project list, becoming a project data manager, assigning additional data managers, creating a team, telling data contributors to share new datasets, and considering creating a data portal.

<https://docs.ess-dive.lbl.gov/manage-data/manage-project-data>

# What's Next?

## What can we do now that we have teams?

- **Project data managers** can encourage data contributors to start sharing datasets and portals with teams
- **Data contributors** can share their datasets with their project teams

Eventually, your teams will have access to a list of datasets.

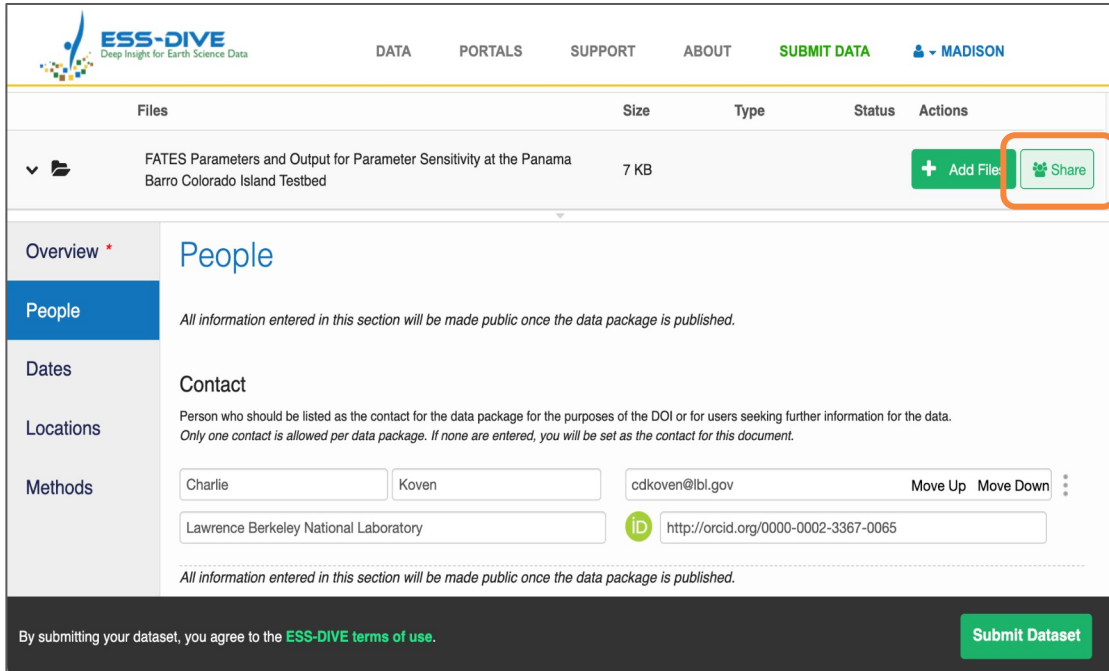
Project managers can update team members over time as people enter or leave a project


# Share Datasets

Assign and View Dataset Permissions



# What is Dataset Sharing on ESS-DIVE?

A screenshot of the ESS-DIVE web interface. The top navigation bar includes links for DATA, PORTALS, SUPPORT, ABOUT, SUBMIT DATA, and a user profile for MADISON. Below this is a table of datasets. The first dataset is "FATES Parameters and Output for Parameter Sensitivity at the Panama Barro Colorado Island Testbed", 7 KB in size. The "Actions" column for this dataset has a green "Add File" button and a green "Share" button, which is highlighted with an orange rectangle. An orange arrow points from this "Share" button to a larger, isolated "Share" button on the right. The main content area shows the "People" section for the dataset, with a "Contact" form. The form includes fields for Name (Charlie Koven), Email (cdkoven@lbl.gov), and Institution (Lawrence Berkeley National Laboratory), along with an ORCID iD field. A "Submit Dataset" button is at the bottom right.

Files	Size	Type	Status	Actions
▼  FATES Parameters and Output for Parameter Sensitivity at the Panama Barro Colorado Island Testbed	7 KB			<a href="#">+ Add File</a> <a href="#">Share</a>

**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.

Charlie Koven cdkoven@lbl.gov Move Up Move Down

Lawrence Berkeley National Laboratory  http://orcid.org/0000-0002-3367-0065

*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](#). [Submit Dataset](#)



Dataset creators can  
choose who should  
**view, edit, and manage**  
**their datasets**



# 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

# Who can I share datasets with?

**Data contributors** (i.e. the person who created the dataset) must initially share their dataset.

Share data permissions with:

- **Individual ESS-DIVE users** (e.g. Co-authors, Collaborators, PIs, Data Managers)
- **Teams** (e.g. a team of project data managers)

***Project data managers do not have default permissions to any datasets***

# Why share datasets?

- **Collaborate** with team members and co-authors
- Provide PIs and data managers **access to project datasets**
  - Manually share project datasets to view all public and private datasets together

## Benefits of sharing with teams:

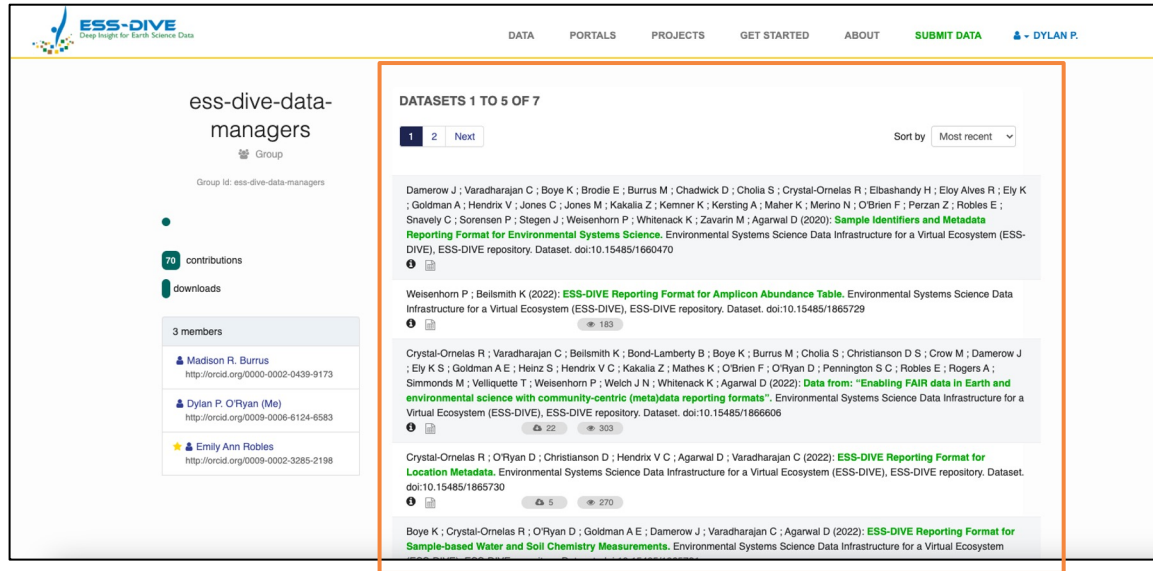
- Easy to share with a **consistent group**, **instead of** one person at a time
- **Update team members** over time, **instead of** individual dataset permissions
  - As people enter or leave a project, manage the team members who can access project datasets

# Sharing datasets with teams

**Data contributors** should start sharing with data managers **at the time they submit a new dataset**

**Data managers** will then be able to **access shared datasets** from the team profile\* **right away**

\* If you share **view access**, the dataset **will not** show up on the team profile



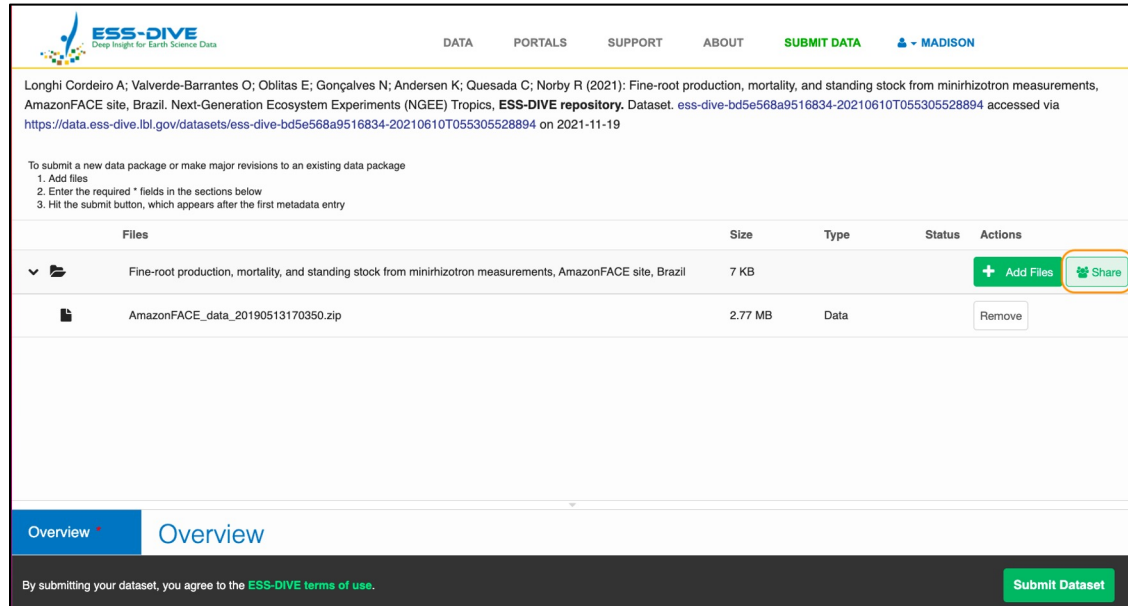
The screenshot shows the ESS-DIVE team profile for 'ess-dive-data-managers'. The page displays the team's name, a group icon, and statistics: 70 contributions and 0 downloads. A list of 3 members is shown, including Madison R. Burrus, Dylan P. O'Ryan (Me), and Emily Ann Robles. The main content area, titled 'DATASETS 1 TO 5 OF 7', lists several datasets. The first dataset is 'Damerow J ; Varadharajan C ; Boye K ; Brodie E ; Burrus M ; Chadwick D ; Cholla S ; Crystal-Omelas R ; Elbasshandy H ; Eloy Alves R ; Ely K ; Goldman A ; Hendrix V ; Jones C ; Jones M ; Kakalia Z ; Kemner K ; Kersting A ; Maher K ; Merino N ; O'Brien F ; Perzan Z ; Robles E ; Snaveley C ; Sorensen P ; Stegen J ; Weisenhorn P ; Whitenack K ; Zavarin M ; Agarwal D (2020): Sample Identifiers and Metadata Reporting Format for Environmental Systems Science. Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE), ESS-DIVE repository, Dataset. doi:10.15485/1660470'. The second dataset is 'Weisenhorn P ; Beilsmith K (2022): ESS-DIVE Reporting Format for Amplicon Abundance Table. Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE), ESS-DIVE repository, Dataset. doi:10.15485/1865729'. The third dataset is 'Crystal-Omelas R ; Varadharajan C ; Beilsmith K ; Bond-Lamberty B ; Boye K ; Burrus M ; Cholla S ; Christianson D S ; Crow M ; Damerow J ; Ely K S ; Goldman A E ; Heinz S ; Hendrix V C ; Kakalia Z ; Mathes K ; O'Brien F ; O'Ryan D ; Pennington S C ; Robles E ; Rogers A ; Simmonds M ; Velliquette T ; Weisenhorn P ; Welch J N ; Whitenack K ; Agarwal D (2022): Data from: "Enabling FAIR data in Earth and environmental science with community-centric (meta)data reporting formats". Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE), ESS-DIVE repository, Dataset. doi:10.15485/1866606'. The fourth dataset is 'Crystal-Omelas R ; O'Ryan D ; Christianson D ; Hendrix V C ; Agarwal D ; Varadharajan C (2022): ESS-DIVE Reporting Format for Location Metadata. Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE), ESS-DIVE repository, Dataset. doi:10.15485/1865730'. The fifth dataset is 'Boye K ; Crystal-Omelas R ; O'Ryan D ; Goldman A E ; Damerow J ; Varadharajan C ; Agarwal D (2022): ESS-DIVE Reporting Format for Sample-based Water and Soil Chemistry Measurements. Environmental Systems Science Data Infrastructure for a Virtual Ecosystem (ESS-DIVE), ESS-DIVE repository, Dataset. doi:10.15485/1866606'.

Consider sharing manage access with data managers to allow data managers to independently update data permissions in the future

# Time to Practice!

## Assign dataset permissions

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

The screenshot shows the ESS-DIVE data submission interface. At the top, there's a navigation bar with links: DATA, PORTALS, SUPPORT, ABOUT, SUBMIT DATA, and a user profile for MADISON. Below the navigation bar, a text area contains a dataset description: "Longhi Cordeiro A; Valverde-Barrantes O; Obilatas E; Gonçalves N; Andersen K; Quesada C; Norby R (2021): Fine-root production, mortality, and standing stock from minirhizotron measurements, AmazonFACE site, Brazil. Next-Generation Ecosystem Experiments (NGEE) Tropics, ESS-DIVE repository. Dataset, ess-dive-bd5e568a9516834-20210610T055305528894 accessed via https://data.ess-dive.lbl.gov/datasets/ess-dive-bd5e568a9516834-20210610T055305528894 on 2021-11-19". Below this, instructions for submitting a new data package are listed. A table displays the dataset files. The first row, "Fine-root production, mortality, and standing stock from minirhizotron measurements, AmazonFACE site, Brazil", has a "Share" button highlighted with an orange box. The second row, "AmazonFACE\_data\_20190513170350.zip", has a "Remove" button. At the bottom, there's a "Submit Dataset" button and a footer with the text "By submitting your dataset, you agree to the ESS-DIVE terms of use." and a "Submit Dataset" button.



ESS-DIVE  
Deep Insights for Earth Science Data

DATA PORTALS SUPPORT ABOUT SUBMIT DATA MADISON

Longhi Cordeiro A; Valverde-Barrantes O; Obilatas E; Gonçalves N; Andersen K; Quesada C; Norby R (2021): Fine-root production, mortality, and standing stock from minirhizotron measurements, AmazonFACE site, Brazil. Next-Generation Ecosystem Experiments (NGEE) Tropics, **ESS-DIVE repository**. Dataset, `ess-dive-bd5e568a9516834-20210610T055305528894` accessed via <https://data.ess-dive.lbl.gov/datasets/ess-dive-bd5e568a9516834-20210610T055305528894> on 2021-11-19

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
✓  Fine-root production, mortality, and standing stock from minirhizotron measurements, AmazonFACE site, Brazil	7 KB			<a href="#">+ Add Files</a> <a href="#">Share</a>
 AmazonFACE_data_20190513170350.zip	2.77 MB	Data		<a href="#">Remove</a>

Overview Overview

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

1. Submit new or open existing dataset  
*\*new datasets cannot be shared until after initial submission*
2. Select the “Edit” button then the “Share” button
3. Grant permission to one team and one individual
4. Click Save
5. Click Submit Dataset

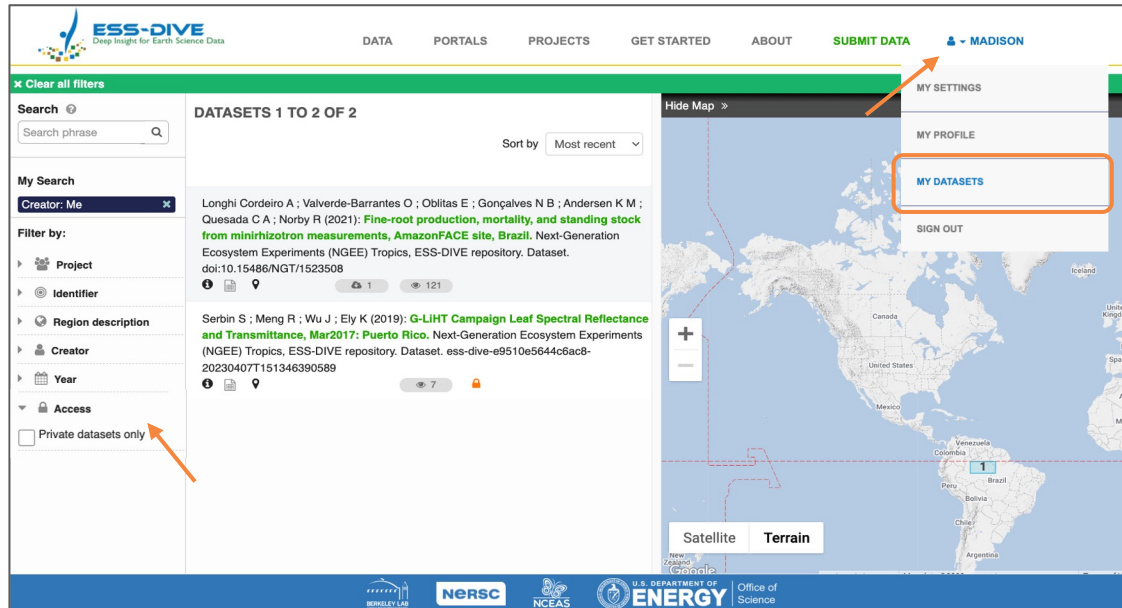
Additional Resources:

[Data Sharing Tutorial Webinar](#)

# Time to Practice!

## Find your datasets

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



Datasets you can **edit**, **manage** or have **created**:

1. Hover over your name in the top-right corner and select “My Datasets” from dropdown

Datasets you can **view**:

1. Clear any search filters
2. Expand the “Access” search filter
3. Select “Private datasets only”

Datasets you have **view permission** to **will not** show up under “My Datasets” or on team profiles

# Feedback - What do you think?

# Policy question: Who should have access to project datasets by default?

Only the dataset creator

Co-authors

PIs

Project Data Managers

Other





# Discussion on project management workflow

Does the project managers, teams, default sharing system work for you?

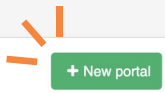
Was anything confusing or unexpected?




Summary of how project data access works currently:

- Pls must approve project data managers
- Project data managers are not automatically on a team
- Can't view all project teams until you are on all teams
- Datasets must be shared by the dataset creator
  - Pls and data managers do not have automatic access to datasets

# Create a Data Portal

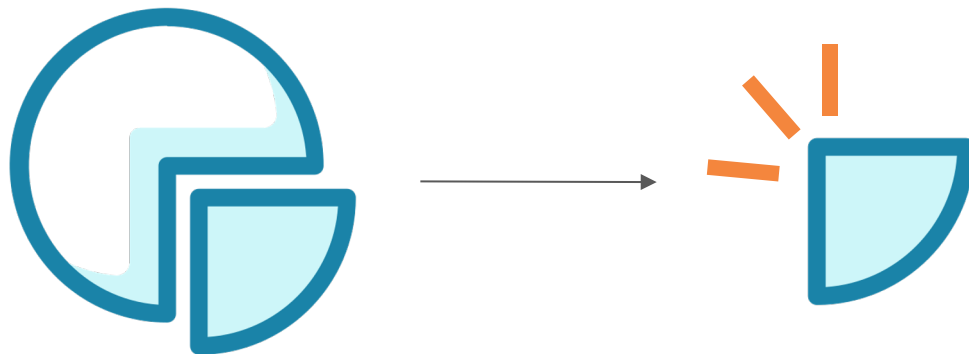
My Portals

+ New portal

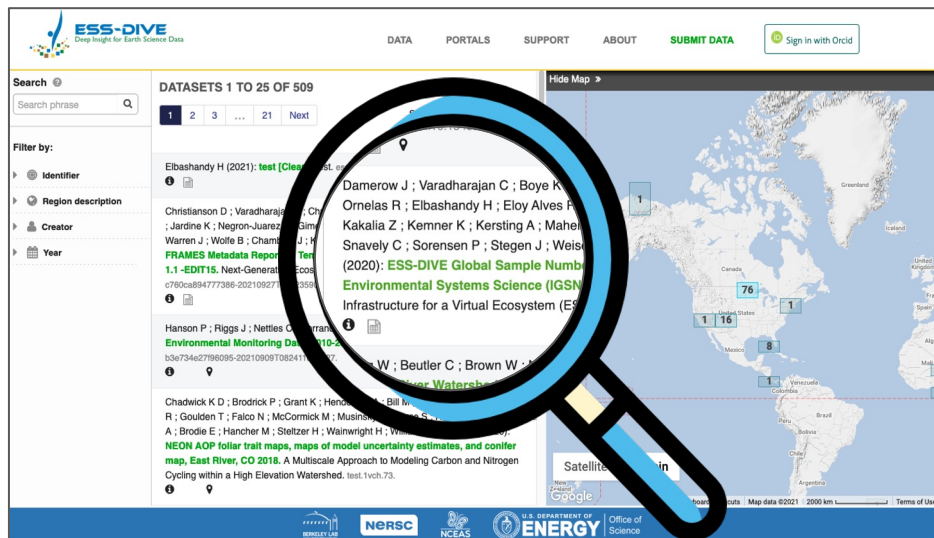
Logo	URL Name	Title	
	east-river-watershed	Data from the East River Watershed, Colorado	<a href="#">Edit</a>
	PNNLRiverCorridorSFA	PNNL River Corridor SFA	<a href="#">Edit</a>
	WHONDRS	Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems	<a href="#">Edit</a>

# What is a data portal?

A data portal is a **collection** of any ESS-DIVE **datasets**. Data portals allow you to easily **highlight and share** related datasets.



# Why use data portals?



- Increase **Findability** of project datasets
- Elevate **public project identity** in ESS-DIVE
- Collect **cumulative metrics** across all project datasets
- Link to project data portals in **annual reports** and **paper publications**

# Data Portals: provide custom view to showcase your project data



Hosted by **ESS-DIVE**

Carbon Dioxide Information Analysis Center

About Fossil-Fuel Emissions Vegetation Response to CO<sub>2</sub> FAQs **Data**

**Search**  
Search these datasets 🔍

**DATASETS 1 TO 25 OF 226**

1 2 3 ... 10 Next Sort by Most recent ▾

Prinn R; Weiss R; Arduini J; Arnold T; DeWitt H; Fraser P; Ganesan A; Gasore J; Harth C; Hermansen O; Kim J; Krummel P; Li S; Loh Z; Lunder C; Maione M; Manning A; Miller B; Mitrevski B; Muhle J; O'Doherty S; Park S; Reimann S; Rigby M; Salto T; Salameh P; Schmidt R; Simmonds P; Steele L; Vollmer M; Wang H J (; Yao B; Yokouchi Y; Young D; Zhou L (2018): **History of chemically and radiatively important atmospheric gases from the Advanced Global Atmospheric Gases Experiment (AGAGE)**. doi:10.3334/CDIAC/ATG.DB1001  
📄 📍 99 4 📄 56 👁 904

Kovacs K; Horvath E (2000): **The United Nations Population Statistics Database**. doi:10.15485/1464266  
📄 📍 168

Blake D (2005): **Methane, Nonmethane Hydrocarbons, Alkyl Nitrates, and Chlorinated Carbon Compounds including 3 Chlorofluorocarbons (CFC-11, CFC-12, and CFC-113) in Whole-air Samples (April 1979 – December 2012)**. doi:10.3334/CDIAC/ATG.002  
📄 📍 232

Hide Map »

A map of Europe and surrounding regions (North Africa, Middle East, Greenland, Iceland) with blue boxes indicating the number of datasets available for each country/region. The counts are: Greenland (1), Iceland (1), Sweden (1), Finland (1), Norway (1), Poland (1), Czech Republic (1), Slovakia (1), Hungary (1), Austria (1), Germany (1), France (1), Spain (1), Italy (1), Greece (1), Turkey (1), Egypt (1), Libya (1), Algeria (1), Morocco (1), Tunisia (1), Mauritania (1), Mali (1), Niger (1), Chad (1), Sudan (1), Ethiopia (1), Kenya (1), Tanzania (1), Uganda (1), Rwanda (1), Burundi (1), DRC (1), Congo (1), Angola (1), Namibia (1), Botswana (1), Zimbabwe (1), Mozambique (1), Swaziland (1), Lesotho (1), South Africa (1), Mauritius (1), Reunion (1), Madagascar (1), Comoros (1), Seychelles (1), Maldives (1), India (1), Pakistan (1), Bangladesh (1), Sri Lanka (1), Nepal (1), Bhutan (1), Tibet (1), China (1), Mongolia (1), Kazakhstan (1), Kyrgyzstan (1), Uzbekistan (1), Turkmenistan (1), Tajikistan (1), Afghanistan (1), Iran (1), Iraq (1), Kuwait (1), Saudi Arabia (1), Oman (1), United Arab Emirates (1), Qatar (1), Bahrain (1), Brunei (1), Malaysia (1), Singapore (1), Indonesia (1), Philippines (1), Vietnam (1), Laos (1), Cambodia (1), Thailand (1), Myanmar (1), Bangladesh (1), India (1), Pakistan (1), Sri Lanka (1), Nepal (1), Bhutan (1), Tibet (1), China (1), Mongolia (1), Kazakhstan (1), Kyrgyzstan (1), Uzbekistan (1), Turkmenistan (1), Tajikistan (1), Afghanistan (1), Iran (1), Iraq (1), Kuwait (1), Saudi Arabia (1), Oman (1), United Arab Emirates (1), Qatar (1), Bahrain (1), Brunei (1), Malaysia (1), Singapore (1), Indonesia (1), Philippines (1), Vietnam (1), Laos (1), Cambodia (1), Thailand (1), Myanmar (1).

## Data tab:

This data portal creates a **view** of **226 datasets** related to a specific research topic

Can see public and private datasets when logged in

# What's inside a Data Portal?



**WHONDRS** Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems

Discover datasets associated with the Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems (WHONDRS)

About Data Metrics

Search

Search these datasets Q

DATASETS 1 TO 18 OF 18

Sort by Most recent

Torgeson J M, Bamkiddie T, Bates T L, Chu R, Crump B C, Danczak R E, Forbes B, Garayburu-Canuso V A, Goldman A E, Logozzo L, Maavara T, Martin E W, McKee S A, Raymond P A, Renteria L, Toyoda J G, Stegen J C (2022): **WHONDRS Surface Water Dissolved Organic Carbon and FTICR-MS across Stream Orders in Four United States Watersheds in 2019 and 2020**. River Corridor and Watershed Biogeochemistry SFA, ESS-DIVE repository. Dataset. doi:10.15485/1891156

Garayburu-Canuso V A, Goldman A E, Toyoda J G, Chu R, Renteria L, Stegen J C, Benayahu A, Torgeson J M, Wili K, Ross M (2022): **FTICR-MS Data from Global Inland River Water and Sediment and from Coastal River Fresh and Saline Sediment Associated with "Functional Trait Relationships in Organic Matter are Conserved in River Corridors Across Continents": Early Career Research Program: Watershed Perturbation-Response Traits Derived Through Ecological Theory**. ESS-DIVE repository. Dataset. doi:10.15485/1824222

Hide Map

A map of the United States with four numbered boxes (1, 2, 3, 4) indicating the locations of the watersheds studied in the dataset. Box 1 is in the Northeast, Box 2 is in the Midwest, Box 3 is in the South, and Box 4 is in the West.

## Collection of Datasets

**WHONDRS** Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems

https://whondrs.pnnl.gov

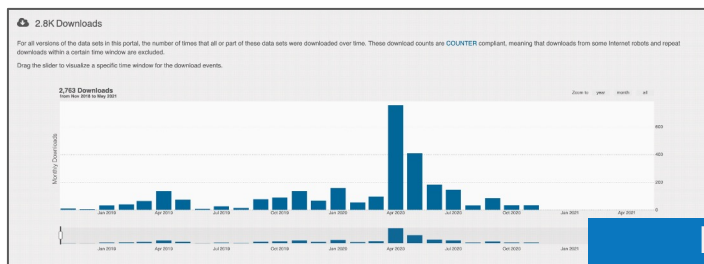
About Data Metrics

Data from the Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems

For more information about WHONDRS, go to <https://whondrs.pnnl.gov>

The Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems (WHONDRS) is a research consortium that aims to understand coupled hydrologic, biogeochemical, and microbial function within river corridors, with an emphasis on increasing accessibility of resources and knowledge throughout the research life cycle. WHONDRS seeks to cultivate a vibrant community around understanding these coupled systems from local to global scales and ultimately to

## Custom Descriptive Pages



## Metrics: Summary of Holdings, View/Download/Citation Metrics...

234 Citations

For all versions of the data sets in this repository, the number of citations reported to DataONE.

Christian Schöner and Michael Rother. 2018. Methanogenesis from Carbon Monoxide. Biogenesis of Hydrocarbons. pp. 1-29. [https://doi.org/10.1007/978-3-319-63114-4\\_4-1](https://doi.org/10.1007/978-3-319-63114-4_4-1). Cites Data: (T. J. Blasing 2013).

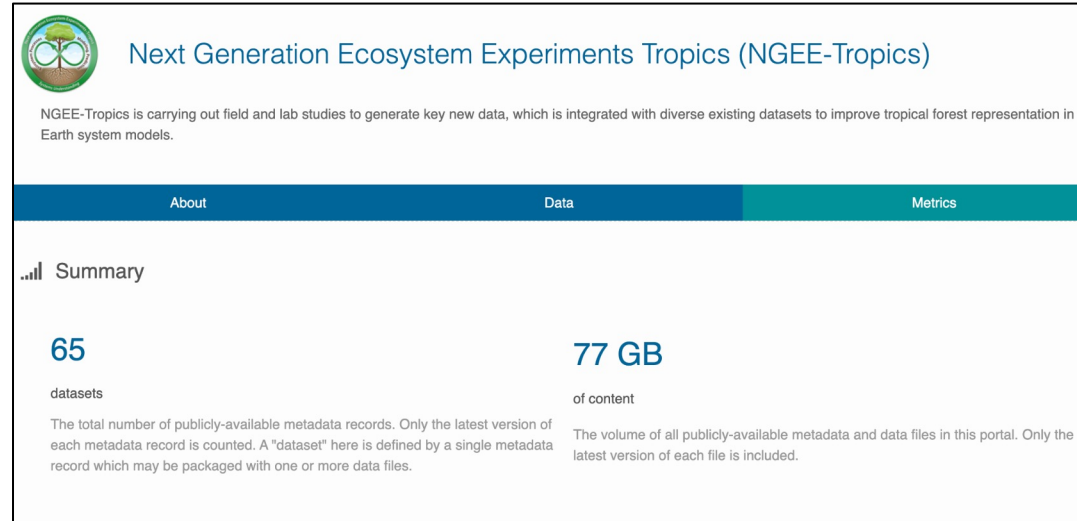
George Brett RUNION, Stephen A. PRIOR, Tyler A. MONDAY, and Janice RYAN-BOHAC. 2018. Effects of Elevated CO<sub>2</sub> on Growth of the Industrial Sweetpotato Cultivar CX-1. Environment Control in Biology. Vol. 56. pp. 89-92. <https://doi.org/10.2525/ecb.56.89>. Cites Data: (Ralph F. Keeling et al. 2009).

Kieran M. Stanley, Aoife Grant, Simon O'Doherty, Dickon Young, Alistair J. Manning, et al. 2018. Greenhouse gas measurements from a UK network of tall towers: technical description and first results. Atmospheric Measurement Techniques. Vol. 11. pp. 1437-1458. <https://doi.org/10.5194/amt-11-1437-2018>. Cites Data: (R. Pinn et al. 2001).

R. Lakshaj-Gownder and BW. Grab. 2019. Temperature trends for coastal and adjacent higher lying interior regions of KwaZulu-Natal, South Africa. Theoretical and Applied Climatology. Vol. 38. pp. 4384-4394. <https://doi.org/10.1002/tac.5675>.

# Explore Data Portal Metrics

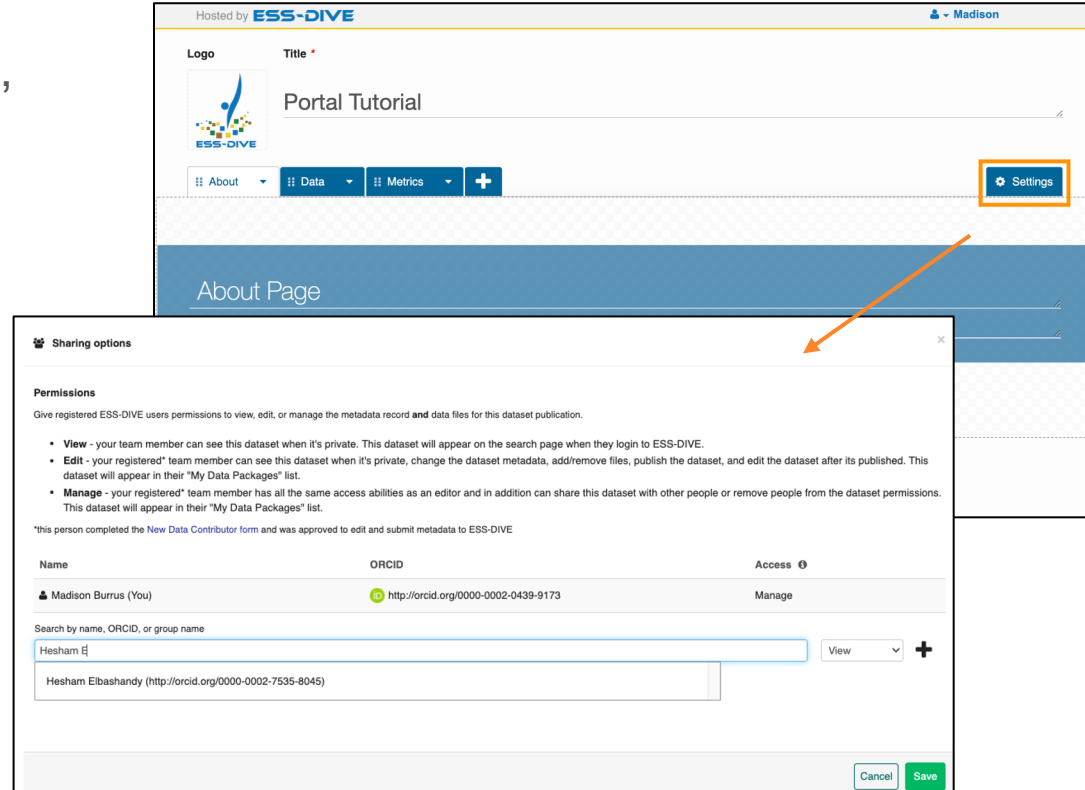
- Total number of datasets
- Volume (bytes) of metadata records, data files
- Most recent date updated
- File types
- Years data collected
- Views, Downloads, Citations



<https://data.ess-dive.lbl.gov/portals/ngeetropics/Metrics>

# Sharing Data Portals

- Share permission to view, edit, or manage a portal
  - **Edit page** markdown,
  - Add/remove **pages**, and
  - Add/remove **data filters**
- Does **NOT** give access to **datasets** in portal
- Share data portal with individuals or team(s)



The image shows two overlapping screenshots of the ESS-DIVE portal interface. The top screenshot displays the 'Portal Tutorial' page, which includes a header with the ESS-DIVE logo, a title field, and navigation tabs for 'About', 'Data', 'Metrics', and a plus sign. A 'Settings' button is highlighted with an orange box. The bottom screenshot shows the 'Sharing options' dialog box, which is open over the 'About Page' section. This dialog box contains a 'Permissions' section with instructions and a list of users with their roles. The 'Access' dropdown is set to 'View'.

Hosted by **ESS-DIVE** Madison

Logo Title \*

Portal Tutorial

|| About || Data || Metrics +

Settings

About Page


**Sharing options**

**Permissions**

Give registered ESS-DIVE users permissions to view, edit, or manage the metadata record and data files for this dataset publication.

- **View** - your team member can see this dataset when it's private. This dataset will appear on the search page when they login to ESS-DIVE.
- **Edit** - your registered\* team member can see this dataset when it's private, change the dataset metadata, add/remove files, publish the dataset, and edit the dataset after its published. This dataset will appear in their "My Data Packages" list.
- **Manage** - your registered\* team member has all the same access abilities as an editor and in addition can share this dataset with other people or remove people from the dataset permissions. This dataset will appear in their "My Data Packages" list.

\*this person completed the [New Data Contributor form](#) and was approved to edit and submit metadata to ESS-DIVE

Name	ORCID	Access ⓘ
Madison Burrus (You)	 <a href="http://orcid.org/0000-0002-0439-9173">http://orcid.org/0000-0002-0439-9173</a>	Manage

Search by name, ORCID, or group name

Hesham E

Hesham Elbashandy (<http://orcid.org/0000-0002-7535-8045>)

View +

Cancel Save



# Public Listing of Data Portals

A screenshot of the ESS-DIVE website's "PORTALS" page. The header includes the ESS-DIVE logo, navigation links for DATA, PORTALS (highlighted with an orange border), SUPPORT, ABOUT, and SUBMIT DATA, and a "Sign in with Orcid" button. The main content area is titled "All portals" and lists five data portals, each with a logo, title, and brief description.

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

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

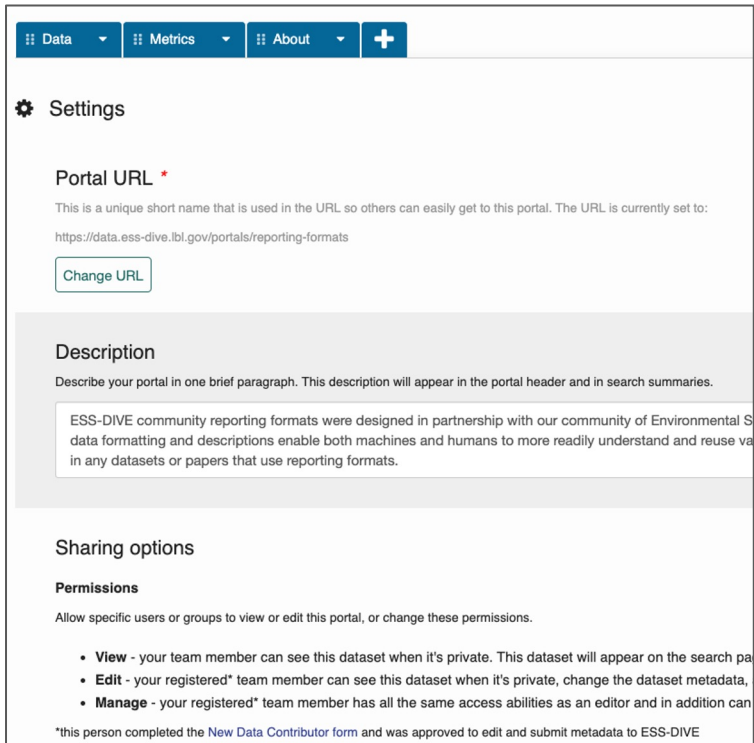
### All portals

- Alpine Treeline Warming Experiment Data Portal**  
The Alpine Treeline Warming Experiment (ATWE) ran from 2008-2016 on Niwot Ridge, in the Front Range of the Colorado Rocky Mountains. It combined common gardens with climate manipulations, using infrared heaters to warm soil and plant surfaces by an amount comparable to current average projections...
- Carbon Dioxide Information Analysis Center**  
The Carbon Dioxide Information Analysis Center (CDIAC) had the primary responsibility for providing the US government and research community with global warming data and analysis as it pertains to energy issues. The CDIAC archive data holdings have been transferred predominantly to the U.S....
- Data from the East River Watershed, Colorado**  
This is a data portal to collect all data collected from the East River Watershed, Colorado.
- Worldwide Hydrobiogeochemistry Observation Network for Dynamic River Systems**  
<https://whondrs.pnnl.gov>
- SPRUCE Experiment Data Portal**  
TBD - description

Your project data portal will be listed on **ESS-DIVE's portal page**  
Anyone from the public can access this page and locate your data portal

# Time to Practice!

## Create and share a portal

A screenshot of the ESS-DIVE portal settings page. The page has a top navigation bar with tabs for "Data", "Metrics", "About", and a "+" button. The "Settings" section is active, showing fields for "Portal URL", "Description", and "Sharing options". The "Portal URL" field contains the text "https://data.ess-dive.lbl.gov/portals/reporting-formats" and a "Change URL" button. The "Description" field contains a paragraph about ESS-DIVE community reporting formats. The "Sharing options" section includes a "Permissions" subsection with a list of roles: View, Edit, and Manage, each with a brief description of their capabilities. A footnote at the bottom states: "this person completed the New Data Contributor form and was approved to edit and submit metadata to ESS-DIVE".

Settings

Portal URL \*

This is a unique short name that is used in the URL so others can easily get to this portal. The URL is currently set to:

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

Change URL

Description

Describe your portal in one brief paragraph. This description will appear in the portal header and in search summaries.

ESS-DIVE community reporting formats were designed in partnership with our community of Environmental Science and Technology (ESS-TECH) members. ESS-DIVE data formatting and descriptions enable both machines and humans to more readily understand and reuse data in any datasets or papers that use reporting formats.

Sharing options

Permissions

Allow specific users or groups to view or edit this portal, or change these permissions.

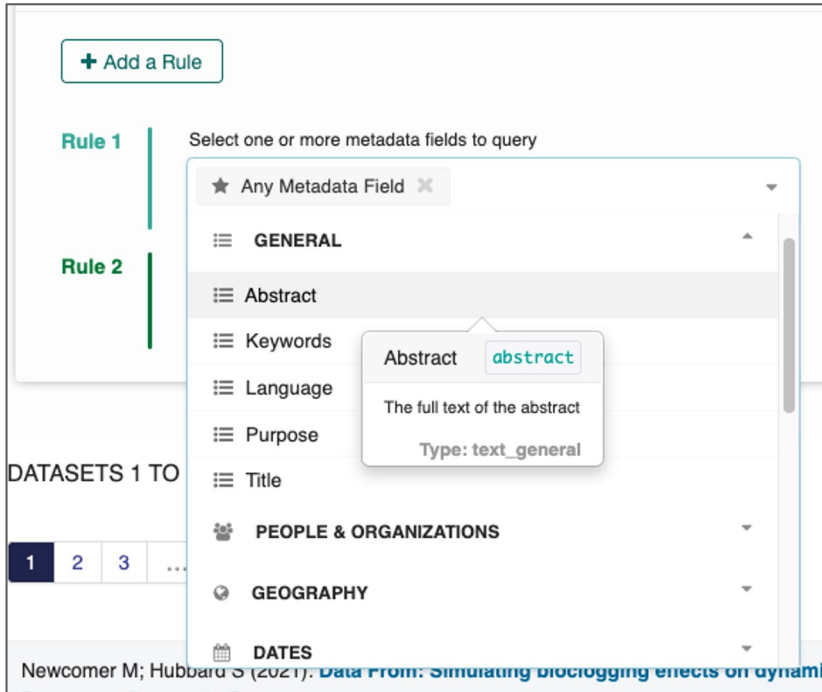
- **View** - your team member can see this dataset when it's private. This dataset will appear on the search page.
- **Edit** - your registered\* team member can see this dataset when it's private, change the dataset metadata, and add new data.
- **Manage** - your registered\* team member has all the same access abilities as an editor and in addition can delete data.

\*this person completed the [New Data Contributor form](#) and was approved to edit and submit metadata to ESS-DIVE

1. Select “Portals” and “New Portal” button
2. On the Settings tab: add url, logo(s), title, and description
3. Share the portal with individual or team
  - a. Only people who have logged into ESS-DIVE using their ORCID can be found in the Sharing Options

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

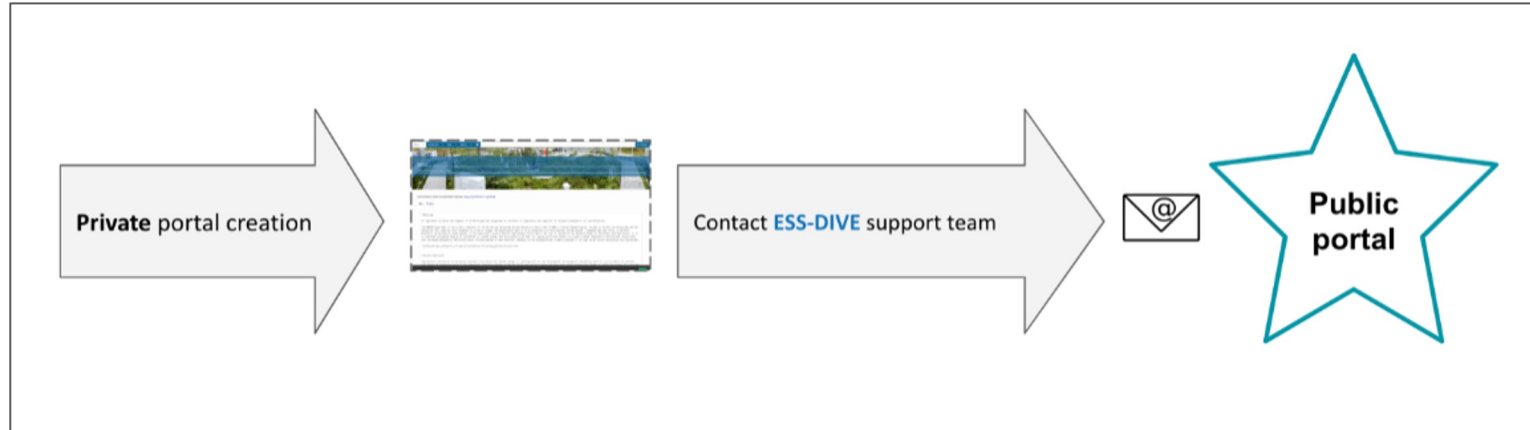
## Add datasets to portal using data filters



**You try: Create an ESS Project portal. Add datasets to your portal using any combination of 2-3 filters. TIP: NGEF Tropics test datasets**

1. In Data tab - scroll to “Change the data in your collection”
2. Add a Rule
  - a. Under Awards and Funding select “Project” as one of the rules
  - b. Enter project name exactly and select “equals” operator

# Portal publication



- Portals are automatically set to private
- ***To release your portal to the public, contact [ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.gov)***
- After it's public, you can provide a link to your portal in publications, etc.

# Linking to External Project Data



# What is External Linking?

Data **stored on other repositories** can be connected to ESS-DIVE metadata **without needing to upload** it directly to the dataset



# What is “External Linking”?

- Store your data where it makes the most sense scientifically or for practical reasons
- **Metadata** will be on ESS-DIVE
- Original dataset will be **searchable** on ESS-DIVE using metadata
- Data can only be externally linked if stored on an approved repository
- External dataset metadata can be bundled into a **Data Portal**

# What does external linking look like?

Downloads 29

Citations 0

Views 24

Copy Citation

Assessment report

Files in this dataset Package: ess-dive-44b1b49c5d7a7ff-20220414T225815865

Name	File type	Size	Download All
Metadata: Snow_depth_sensor_measurement_data_for_Upper_Sub.xml	EML v2.2.0	15 KB	Download

### External Links to Data or Metadata

External links for this dataset		
Description	Relationship	URL
doi:10.6073/pasta/388c70359c8d0cd79dc3875d6510071d	[same as] Original publication of this dataset (where the data+metadata can be found)	<a href="https://doi.org/10.6073/pasta/388c70359c8d0cd79dc3875d6510071d">https://doi.org/10.6073/pasta/388c70359c8d0cd79dc3875d6510071d</a>



# Why include external links?

The **ESS publication policy requires** replicating datasets on ESS-DIVE even if the data are already published with a DOI

## Consider using this feature if:

- Your data is spread across **established** repositories (e.g. NMDC, EDI, Zenodo) and you **don't want to replicate** existing public datasets
- You want to establish links between data on different repositories
- Individual files in a dataset are more useful when viewed from a particular **data or analysis platform** (e.g. *google earth engine*)

# Use Cases to Store your Data Externally

Scientific, practical, or other funding compliance reasons

## 1) Original Dataset Publication

same as

- Approved Data Repositories
  - EDI
  - USGS ScienceBase

## 1) Complete Copy of Data Files

archived at

- Large Project Data Archives
  - SPRUCE
  - Watershed Function SFA
  - NGEI Tropics

## 3) Individual Files

has part

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

# Documentation Provides How-To Instructions



A screenshot of the ESS-DIVE documentation website. The page is titled 'Manage Project Data' and is part of a 'Guide to Using ESS-DIVE'. The left sidebar contains a navigation menu with sections: 'Get Started' (Register to Submit Data, Dataset Requirements, Data Reporting Formats, Submit Data with Online Form, Submit Data with API, Link to External Data Sources), 'MANAGE DATA' (Register Dataset Citations, Create Data Portals, Share Data Permissions, Manage Project Data - highlighted), and 'SEARCH &amp; DOWNLOAD DATA' (Search for Data, Download Data, Access Data Portals). The main content area has a header with links: 'Main Website', 'Search Data', 'Submit Data', 'Contact Us', and a search bar. The 'Manage Project Data' section includes a sub-header 'Discover Project Management Features' and three columns of information: 'Project List' (Check that your project is on this list, your project name is correct, and the PI list is up-to-date), 'Project Data Managers' (Gain access to additional information about your project and access the Project Teams feature), and 'Project Teams' (Create a team of project members on ESS-DIVE and share datasets or data portals with your team).

## Manage Project Data

<https://docs.ess-dive.lbl.gov/manage-data/manage-project-data>

## Share Data Permissions

<https://docs.ess-dive.lbl.gov/manage-data/share-data-permissions>

## Portals

[docs.ess-dive.lbl.gov/portals/why-use-data-portals](https://docs.ess-dive.lbl.gov/portals/why-use-data-portals)

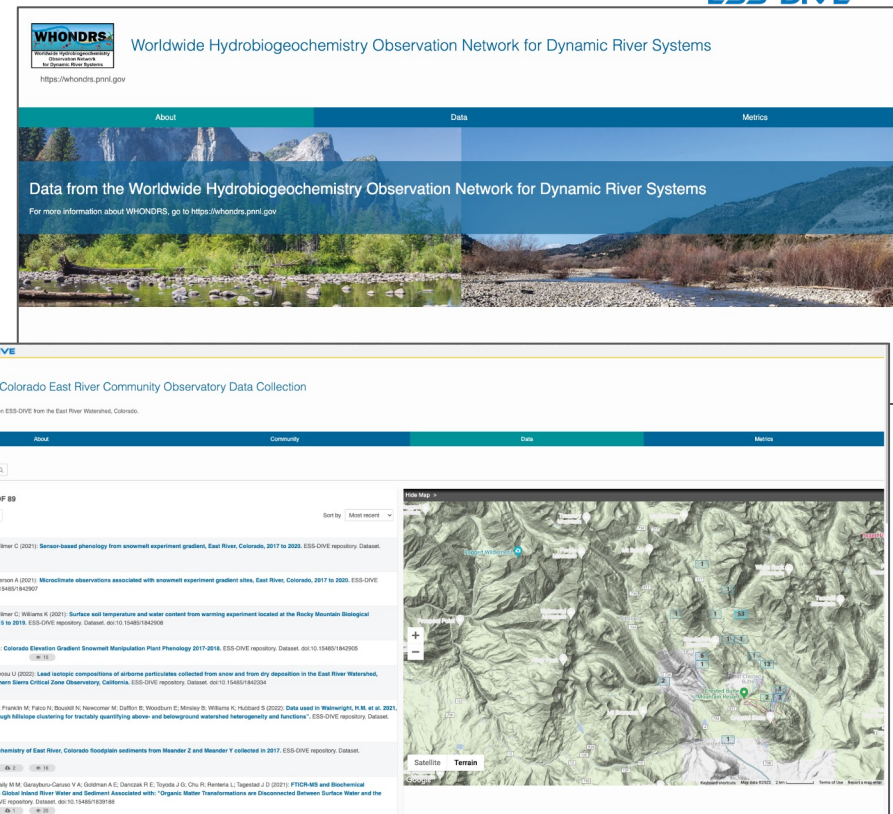
## External Linking

[docs.ess-dive.lbl.gov/contributing-data/link-to-external-data-sources](https://docs.ess-dive.lbl.gov/contributing-data/link-to-external-data-sources)

# Summary: Evolving Project Data Management Tools



- Project-specific data **search**
- Enable project-centric data **portals**
- Project data **citations and metrics**
- Assign project **data managers** and create **teams** that can change over time
- **Share** datasets and portals with project members and teams to enable collaboration





# Questions?

# Lunch Tutorial and Posters

## UP NEXT: Creating and Publishing High-Quality Datasets

1:00 PM – 2:30 PM **ET** / 10:00 AM – 11:30 AM **PT**

Learn how to upload and publish data with ESS-DIVE as a new contributor in this hands-on training session. **Presenter:** Emily Robles



## *Posters*

ESS-DIVE Overview: A Scalable, User-focused Repository for Earth and Env Science Data **Presenter:** Shreyas Cholia



Community-developed (meta)data reporting formats to enable data reuse in ESS-DIVE, **Presenter:** Charu Varadharajan



# Connect With Our Team!

To get help:

[ess-dive.lbl.gov](https://ess-dive.lbl.gov)



[ess-dive-support@lbl.gov](mailto:ess-dive-support@lbl.gov)

[docs.ess-dive.lbl.gov](https://docs.ess-dive.lbl.gov)

To stay updated:

[ess-dive-community@lbl.gov](mailto:ess-dive-community@lbl.gov)



[@essdive](https://twitter.com/essdive)

<https://bit.ly/essdiveMailingList>



## Acknowledgements

Advisory Groups: ESS-DIVE Archive Partnership Board, ESS Cyberinfrastructure Working Groups

Funding: EESSD Data Management