

## A few logistical details

- We are a very large group (over 200), please mute your microphone unless you are speaking. We will have a period of small-group discussion at the end when you can leave an open channel.
- You can change your name to include your site -- and pronouns if you like -- by clicking the three small dots at the top right of your "hollywood square."
- We'll take questions in the chat throughout the session. My colleagues Jenn Caselle and Kristen Weiss will be responding in real time. If we can't keep up or need to gather additional information, we'll follow up with a Q&A document shared to all participants.

## **Land Acknowledgement**

If you know the identity of the Indigenous People of your region, please enter their name in the chat.



#### **Ground rules**

The LTER Network has a <u>code of conduct</u> (see Iternet.edu/Iter-meetings-code-of-conduct). It applies to all our meetings and spells out acceptable and unacceptable behavior and consequences.

Above and beyond the code, we begin our meetings with a reminder to:

- Be respectful, honest, inclusive, accommodating, appreciative, and open to learning from everyone else.
- Value everyone's time by avoiding distractions and taking shared responsibility to ensure that everyone is heard.

#### Dr. Diane McKnight

Chair, LTER Science Council Professor, University of Colorado, Boulder



## Outline

About the Network

Diversity, Equity, and Inclusion

Information Management Meet your Colleagues

Brief description of the LTER Network; what makes it special; how it is organized; and where to learn more The Network's commitment to diversity, equity and inclusion; what we are doing; what we plan to do; how to connect

Finding data and making your data findable, accessible, interoperable, and reproducible. (Hint -it starts before you even start collecting it!)

A chance to connect with other LTER participants in smaller groups around a variety of shared interests

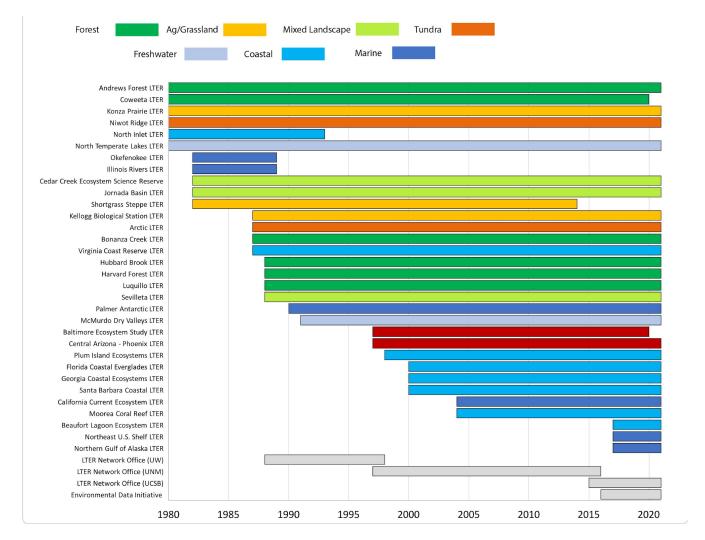


## LTER NETWORK

#### Ecosystem Type

- ★ Administrative
- X Coastal
- **△** Forest
- + Freshwater
- $oldsymbol{
  abla}$  Grassland-Agriculture
- \* Marine
- **♦** Mixed-Landscape
- O Tundra
- ☐ Urban

#### **Funding Cycles**



- Initial funding highly competitive and based on a well-integrated scientific plan to understand how this particular ecosystem works. New opportunities arise occasionally, but not often.
- Each site reapplies for funding every 6 years and is rigorously reviewed every three years.
- As a student or a new staff member, you may be asked to participate.

#### **Long-Term Observations**

Each site maintains long-term records of key parameters for that ecosyster providing critical conLong-term ecological and environmental-cosystem change, which studies and crossstudies allow us to better understand the

> inherent variability of natural systems, to discern trends and shifting baselines, and to witness rare events and unanticipated ecological surprises.

#### Long-Term

LTER sites build trusting relationships with resource managers, educators, and landowners in their regions.

#### **Long-Term Experiments**

LTERs maintain experimental manipulations that test potential simulation models.

### portunities

—Hughes et al. Bioscience, 2017 groups of researchers with diverse backgrounds. Each new generation of scientists applies new tools and explores new questions in systems where the context is well understood.



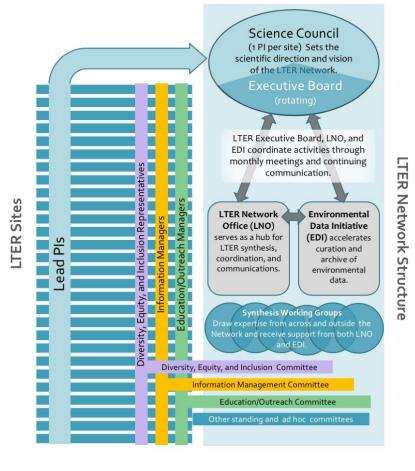
Long-term Ecological Research (LTER) sites pursue theoretical and applied research on ecological phenomena that play out over decades, including rare and extreme events, shifting baselines, and legacies of past environmental change.

With its broad geographic distribution, common scientific themes, and careful data stewardship, the LTER Network offers an ideal structure for synthetic ecology, which is facilitated by the Network Office (LNO) and the Environmental Data Initiative (EDI) through the Synthesis Working Groups (SWG) and other network-wide activities.



Long-term Ecological Research (LTER) sites are funded by the National Science Foundation (NSF) in cooperation with other federal agencies, universities, and private foundations.

NSF directly funds the operations of the Network Office and the Environmental Data Initiative.



Committees open to Graduate Student involvement:

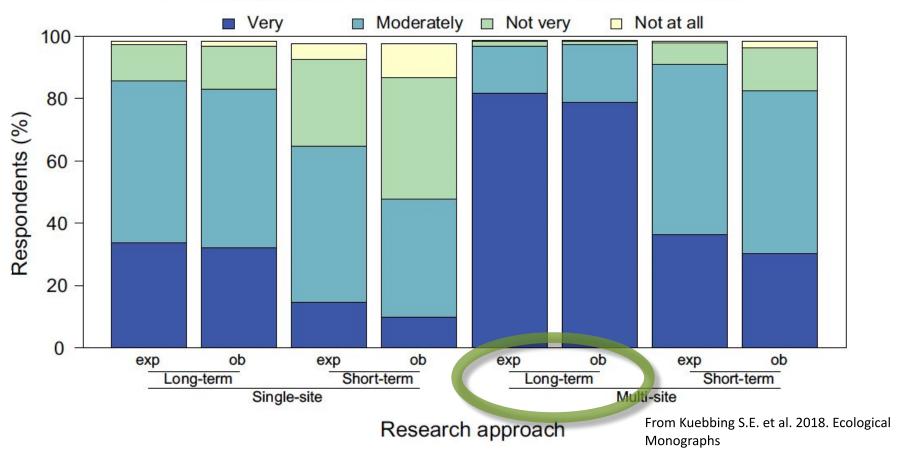
- Graduate Student Site Reps
- Diversity, Equity, and Inclusion
- All Scientists' Meeting Planning Committee
- ILTER (limited)
- Communications (limited)

#### Discussion Groups:

- Comm-interest
- ILTER-interest

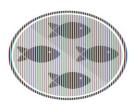
For more information, visit: https://lternet.edu/network-organization/

To what extent are the following research approaches important to developing general theories in ecology and evolutionary biology?



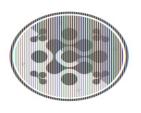
## LTER CORE RESEARCH AREAS

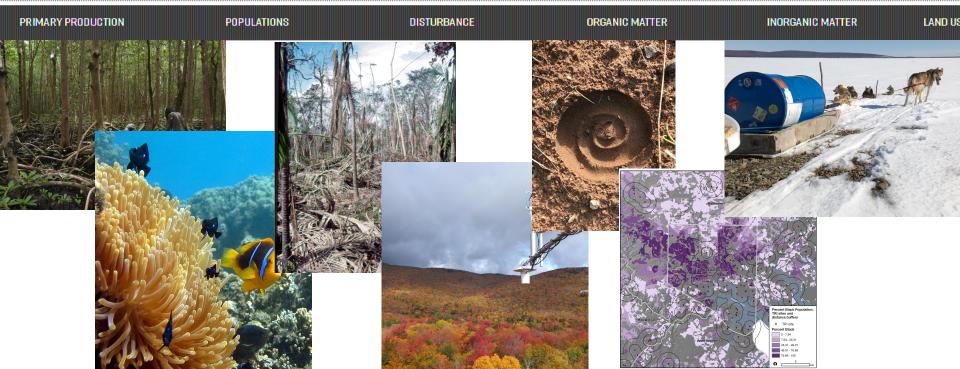
















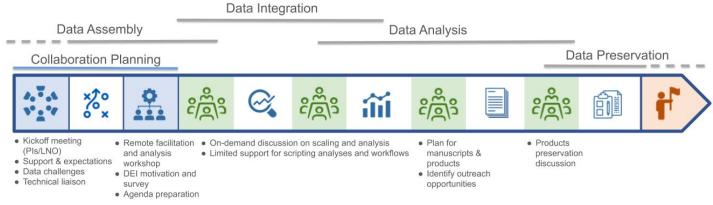
- All Scientists' Meeting
- ILTER Open Science Meeting
- Science Council Annual Meeting (in-person)
- Lead Principal Investigators Quarterly Meeting (virtual)
- Information Managers Annual Meeting
- Monthly Committee Meetings
- Synthesis Working Groups



## Synthesis Working Groups

- Combining previously collected data for new insights
- Competitions in 2016, 2017 and 2019 (post ASM), and 2020. Planned for 2022.
- 12-18 people/group meeting regularly for up to 2 years
- Funding supports travel and lodging, some analytical assistance.
- Competitions are highly selective.





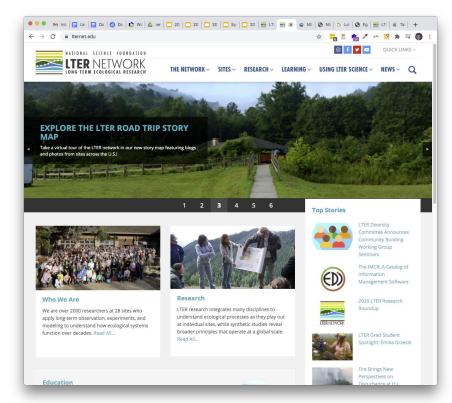
## Cool. So how do I find out what's happening?

#### LTER Network Website:

https://lternet.edu

#### Three minutes for 3 challenges:

- What is the LTER Network's Twitter handle?
- Who is the Information Manager at Jornada LTER?
- Name one of the currently-funded synthesis working groups

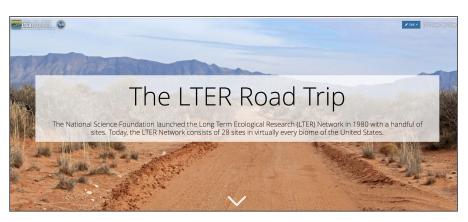




https://www.instagram.com/lter\_community/



Graduate Student Blog: https://ssalter.blog/



The LTER Road Trip: https://lternet.edu/lter-road-trip



https://lternet.edu/stories/science-writing-opportunity/

## LTER Network News (monthly) events, activities, people



#### LTER Science Update

(quarterly)
Featured science,
LTER-in-the-news



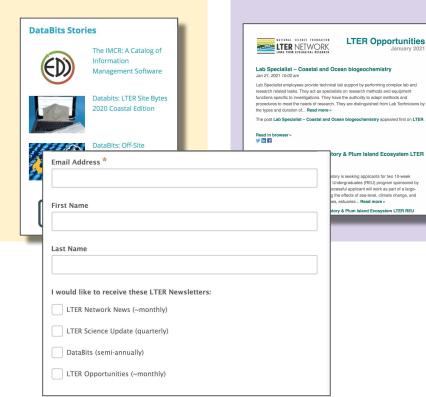
## http://lternet.edu/signup.....



Also: http://slack.lternet.edu

#### **DataBits**

(semi-annually)
Information
Management-related
news and resources



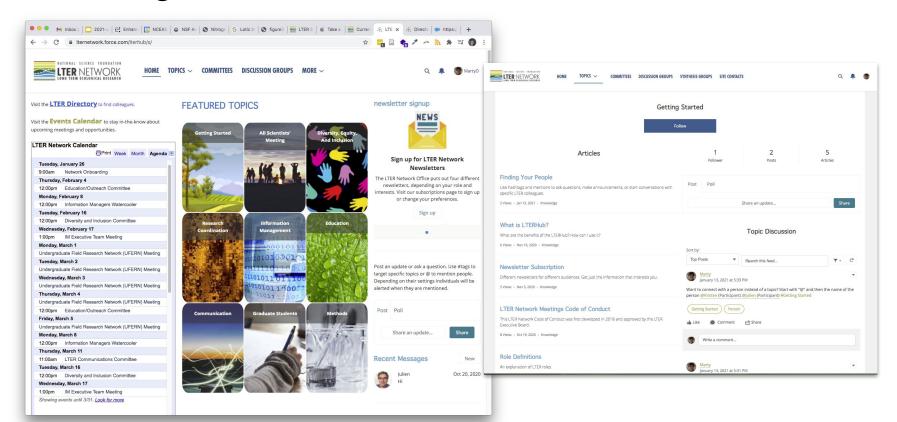
#### LTER Opportunities

(~monthly)

New job listings as they are posted to

LTERnet.edu

## Coming soon: LTERHub







**Diversity:** Who is there

Inclusion: How they are treated **Equity:** Outcomes

LTER recognizes that participation in science has not been equally accessible to all and is committed to dismantling barriers and confronting unrecognized biases.

#### Why?

- Promote creative science
- Address urgent challenges through broader participation
- Advance justice

## Beyond the Code of Conduct



Inclusion and Equity require us to step out of OUR experiences and try to put ourselves in someone else's shoes.

- Maybe you were raised with camping and boating. Remember other colleagues may not have been.
- When you show up with a pair of binoculars, do neighbors assume that you are birdwatching? Or that you are casing nearby homes?
- If you identify as a gender that matches your appearance, you may not understand the need to state your pronouns. But what if that's not the case?

#### **DEI Committee**

Representatives from each site, plus at-large members meet monthly to share strategies used at individual sites and develop Network-wide initiatives.

#### Resources

Background reading and evidence-based practice recommendations at https://lternet.edu/network-o rganization/diversity-resourc es/

## **Training**

Regular opportunities for network-wide and train-the-trainer opportunities through credible partner organizations.



- Working groups on Community-building, funding, resources, and allyship.
- Supporting site initiatives
- Builds on site DEI initiatives



- Curated list of pointers to useful resources in categories such as bystander intervention, recruitment, field safety, and having uncomfortable conversations
- Continuously updated



- Mentorship Training , 2018 ASM
- Train-the Trainers
   Bystander Intervention
   January 2020
- Bystander Intervention
   November 2021

The LTER Diversity Committee invites you to a monthly seminar and conversation group for underrepresented members of the long-term research community. This month, we celebrate:

#### Long-Term Research in the Southwest

Tuesday February 9<sup>th</sup>, noon PST/ 2 pm CST More information and registration: https://tinyurl.com/yy7ghuch

#### Speakers:

Dr. Y. Anny Chung

"The ecology of plants and microbes in a changing world"

Dr. Laureano Gherardi

"Using complementary data to understand ecosystem responses to Global Change"

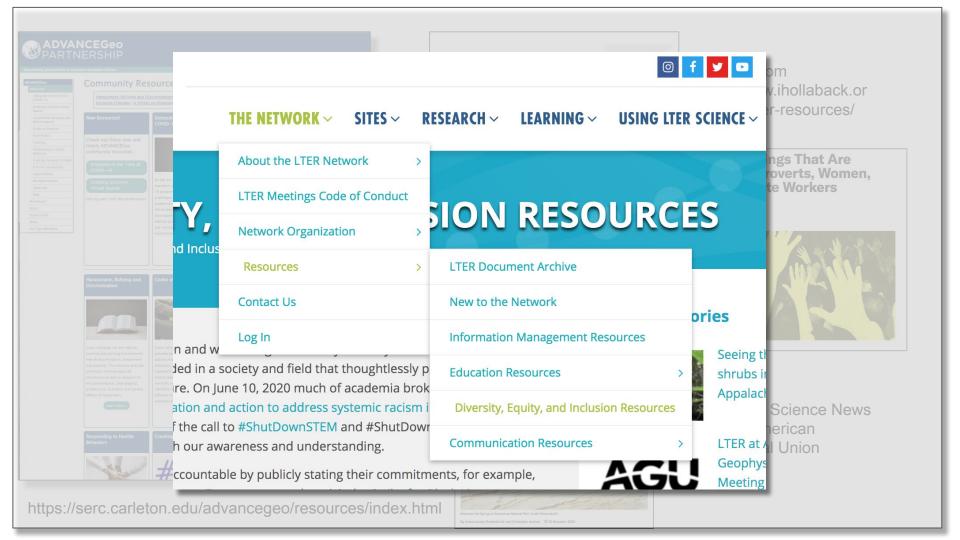
**Upcoming Seminars:** 

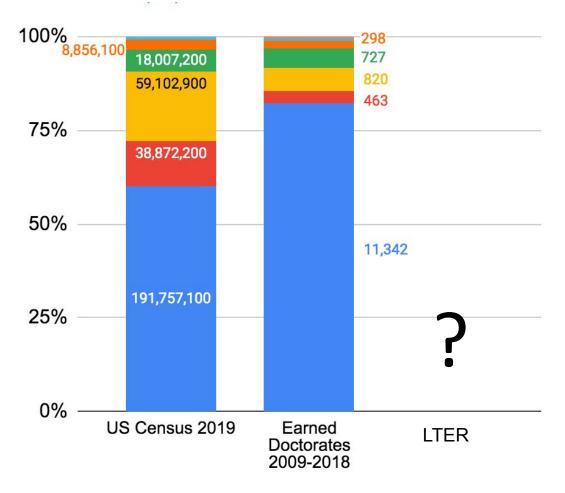


March 9th Tropical Forests
April 13th Grasslands
May 11th Urban Ecosystems

Monthly seminars and conversation for individuals who self-identify as members of a group that is underrepresented in the network, their site, or their professional spaces.

- Goal is create a support system for LTER participants from historically-excluded identities even when there may be few people at their sites with those identities
- Short science talks followed by conversation and community-building





- Race not reported
- Native Hawaiian and Other Pacific Islander
- American Indian and Alaska Native
- Two or More Races
- Asian alone
- Hispanic or Latino
- Black or African American
- White alone, not Hispanic or Latino

\*In agricultural and natural resources and geosciences. Percentages are similar for ecology, which has only been separately identified for the past 5 years.

1000 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		
What is your highest educational level?  Less than high school  High school or GED graduate  Some college or vocational training	Do you identify as gay or lesbian, bisexual, tra Yes	ansgender, transsexual and/or belonging to the LGBTQI community?
2-year degree 4-year degree Master's degree Professional degree (MD, JD, DDS, DVI	NATIONAL SCIENCE FOUNDATION	ected by a significant sensory or mobility challenge?
PhD Other	LTER NETWORK LONG TERM ECOLOGICAL RESEARCH	
Gender		or more people who are not able to fully care for themselves andition or disability)?
Female Male Non-Binary	downs@lterhub.edu	person another person but am not the primary caregiver
Prefer Not To Answer Prefer to self describe	â	or another person, but I have been a primary caregiver in the past or another person, and I have not been a primary caregiver in the
Do you identify as		
Black or African American American Indian or Alaska Native Asian	Log in	
Native Hawaiian or Pacific Islander White or Caucasian Other racial identity Prefer not to Answer	Forgot your password? Not a member?	
Do you identify as Hispanic or Latinx?  Yes	g+ in y	rvey (at a later time) on the climate for diversity, equity, and in-
○ No		
Prefer to self describe		
Prefer Not to Answer		

## Additional Ways to Participate

#### At your site

- Join or start a self-education group for allies.
- Introduce a DEIA (diversity, equity, inclusion, accessibility) moment to your lab group to raise awareness of issues and resources.
- Join a committee or working group at your site.

#### In the network

- Take the survey! And the follow up climate survey later this spring.
- Participate in the community calls.
- Look for training opportunities.
- Join the DEI Committee as a site rep or at-large member.

#### Wherever you are

- Be alert to practices, policies, and unwritten rules that disadvantage some groups. (Fresh eyes are really valuable.)
- Look for opportunities to improve connections with historically excluded communities and to build a more inclusive network.
- Don't hesitate to call attention to issues as you see them.
- Maintain a spirit of openness and creative problem solving.



## LTER Information Management

LTER Program started with data management requirements

Every LTER site has an Information Manager

40 years of experience

2013 LTER data repository - BCO-DMO, ADC came later

LTER Network Data Policy <a href="https://lternet.edu/data-access-policy/">https://lternet.edu/data-access-policy/</a>

2016 Environmental Data Initiative - open for all environmental data

## Site Information Manager

Find out who is yours

Talk to them before you need that DOI

Can assist throughout the data life cycle:

Collection - organization, QA/QC, formatting

Discovery - reuse existing data

Documentation - EML metadata, data standards

Archiving - submission to EDI repository





# environmentaldatainitiative.org portal.edirepository.org

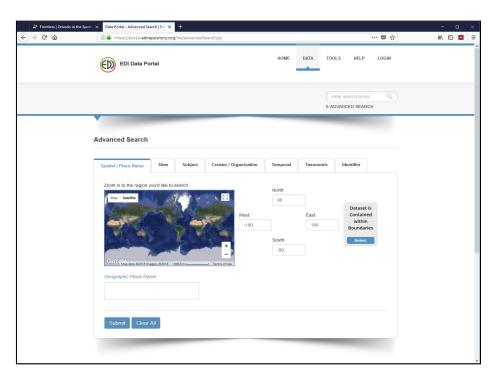


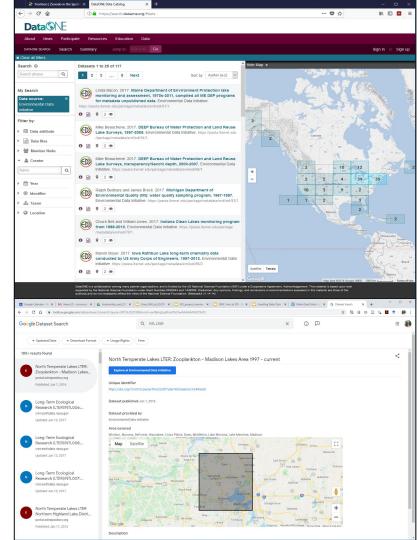
info@environmentaldatainitiative.org

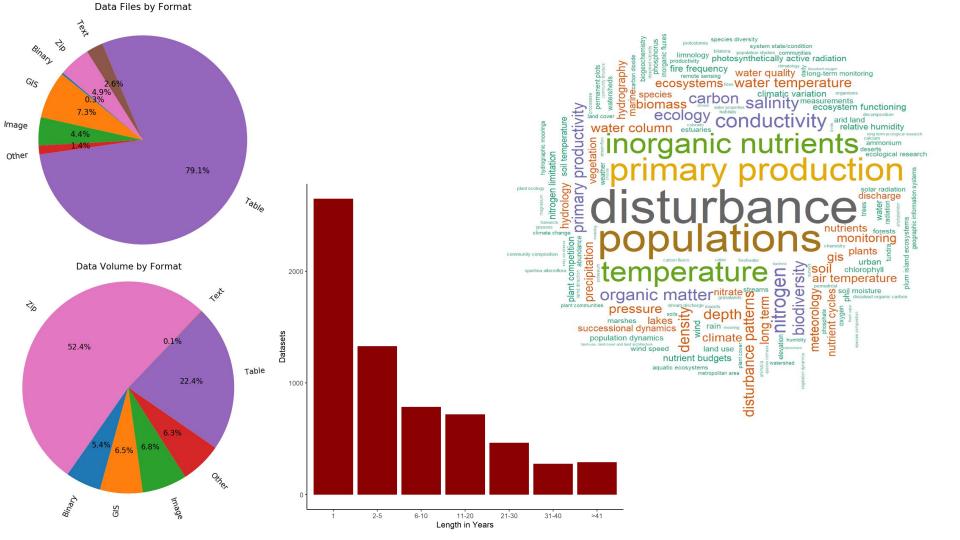
## **EDI** Position

- Accepts all Environmental Research Data
- Committed to high standards in FAIR, TRUST, CARE
  - Extensive and high quality science metadata
  - Trustworthy and widely accepted repository
  - Ethical approaches to sensitive data
    - Indigenous Peoples Data Governance
    - Data related to sensitive species
    - Human subject data

## portal.edirepository.org







## Supporting Synthesis (Data Reuse)

High quality of metadata assured through automated checks

Archiving synthesis data products

Analysis Ready Data

ecocomDP - community observation data from EDI and NEON

climDB - site specific climate measurements

soil data

## Resources

Your local Information Manager

EDI personnel

EDI website, webinars, ezEML

EDI data fellowships

Distributed graduate seminar

Data Help Desks at national conferences

## Meet Your Colleagues (20 Minutes)

#### Self-select into conversation groups:

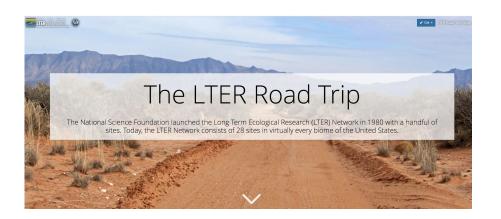
- 1. Biogeochemistry
- 2. Community Ecology
- 3. Microbial Ecology
- 4. Social-Ecological Science
- **5.** Animal Behavior
- **6.** Plant Ecology
- 7. Spatial Ecology
- 8. Open Data
- 9. Reproducible Research
- 10. Science Communication

- **11.** Stakeholder Engagement
- 12. First Generation Academics
- 13. Queer in Ecology
- 14. Black and Brown in Ecology
- 15. Allyship
- 16. Runners
- 17. Bicyclists
- 18. Swimmers and SCUBA Divers
- 19. Home Brewers
- 20. Knitters and Quilters
- 21. Musicians
- **22.** Bonus Room



## Opportunities for LTER Graduate Students

- Grad Student Committee & Site Reps
- LTER Instagram
- Grad Student blog
- Science Writer Program
- Synthesis Working Groups





THE NETWORK ~ SITES ~ RESEARCH ~

#### **GRADUATE STUDENT**

The LTER Graduate Student Committee was established to foster interaction among graduate students working LTER sites and between students and senior LTER scientists, to create student opportunities for intersite reseal and to develop interdisciplinary graduate student training programs. Membership includes student representa from the LTER sites.

Description: Committee of graduate student representatives from each LTER site

#### Chairs:

% Brian Kim (BLE)

% Natasha Christman (ARC)

#### **Story Spotlights**

#### Research in isolation: graduate students in the COVID-19 era

In this Ecotone blog, LTER graduate student Erin Winslow explores how grad students across the Network have coped during the pandemic, and how this year's challenges have impacted their priorities, career paths, and perspectives.



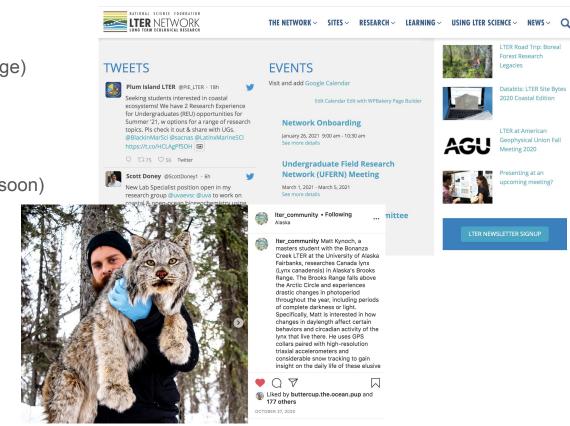
## Ways to Engage with LTER Network

- Website: Iternet.edu
- Newsletters (sgn up on homepage)
- Social media
  - o Twitter: @USLTER
  - Instagram: @lter\_community
  - LinkedIn and Facebook
- LTER Community Hub (coming soon)
- Slack

Synthesis Working Groups

All Scientists Meeting

Committees



## About the Network (~30 min)

- Site map
- Commonalities
  - Long term perspective
  - 5/7 Core themes
  - Commitment to FAIR data
  - Catalysts and attractors for many related projects
  - Role of long term experiments in the scientific community
  - Power of cross-site comparison
  - Long term relationships with education programs and land/water managers
- Site Differences
  - Site partners and organizational structures
  - Specific research questions

- Network structure
  - NSF/Funding and review process
  - Science Council/Executive Board
  - Network Office
    - Synthesis
    - Coordination
    - Communication
  - Committees
- Connecting with the Network
  - Website
  - Newsletters
  - Community Platform
  - Slack
  - Getting involved (committees, grad rep, writing fellows, synthesis groups)

## Diversity, Equity, and Inclusion (15 min)

- What are D, E, and I?
- Value of Inclusion
- Network Code of Conduct
- But inclusion goes beyond avoiding bad behavior
- Be aware of differential impacts
- Current activities
  - DEI Committee introduce\*
  - ADVANCE Geo training
  - Demographic Survey
  - Climate survey
  - Site Strategies
- Pointers to resources:
  - Network web resources\*
  - ADVANCEGeo, especially 5D's\*
  - Ecology-plus

- Leadership is important <u>and</u> inclusion is a community job.
- The need is urgent <u>and</u> resources are limited.
- Fresh eyes are really valuable.
  - Look for opportunities to improve connections with historically excluded communities and to build a more inclusive network;
  - Don't hesitate to call attention to issues as you see them:
  - Maintain a spirit of openness and creative problem solving

## LTER Data

- Your data isn't just yours a short history of LTER Information Management
- Site information managers
- Data archiving begins at data collection
- What is EDI?
- Where to find Network data
- Supporting synthesis and data reuse
- Additional data resources

- This is not work only for people of color—white people need to see the value in increasing DEI and be participating
  - "I'm an old white guy—what can I contribute?": a lot!
  - o Implicit bias awareness, creating a sense of belonging in your lab, attending events
- This is not work only for a committee—again, we all need to be participating
  - The mindset that DEI is "being taken care of here and doesn't involve me" will not get us far
- There is no "diversity vs. excellence" tradeoff—we can have both
  - o Changing hiring practices and recruitment efforts, and expanding our networks will go a long way
- Intimidated? Overwhelmed? Don't know where to start?
  - Ease into it, focus on a specific issue, seek out accessible resources
  - o If you are an expert: Be kind, patient, and helpful to those who aren't yet