

May 28, 2020

Federal Community of Practice for Crowdsourcing and Citizen Science (FedCCS)



FedCCS May 2020 Meeting "Community and Citizen Science Data Quality" and "COVID-19 Citizen and Open Science"

Thursday, May 28, 2020 at 2:30 – 4:00 PM Eastern Time

The FedCCS May 2020 Meeting will focus on "Data Quality" and we will also have a speaker every month to discuss "COVID-19" related crowdsourcing and citizen science efforts. Professional scientists are often skeptical about the quality of data collected by unpaid volunteers, citizen scientists, and other community-based monitoring efforts. However, there is a growing body of publications proving that the data quality from citizen science and community-based projects can be equal to or even surpass that of professionals.

In this month's meeting, we have two speakers presenting on data quality. **Nicole Herman-Mercer** from the U.S. Geological Survey (USGS) will discuss the data quality from a community-based water quality monitoring project called the Indigenous Observation Network (ION) and how it compares to similar data collected by professional scientists. **Hilary Burgess** from the Coastal Observation and Seabird Survey Team (COASST) and member of the Citizen Science Association (CSA) Data and Metadata Working Group will explain the Data Quality Resource Compendium for Citizen and Community Science projects.

For our COVID-19 speaker this month, we will have **Lea Shanley** (FedCCS Co-Founder and former Co-Chair as well as Senior Fellow in the Nelson Institute at the University of Wisconsin Madison) discuss the landscape of COVID-19 citizen science and open science efforts emerging.

Agenda: (Times in Eastern Time Zone)

- 2:30 - 2:35 PM **Welcome and Introductions**, [Participate with Menti](#)
- 2:35 - 2:55 PM **Nicole Herman-Mercer** - "Data Quality of the Indigenous Observation Network"
- 2:55 - 3:15 PM **Hilary Burgess** - "A Resource of Resources for Citizen Science Data Quality"
- 3:15 - 3:30 PM **Data Quality Q&A Discussion**
- 3:30 - 3:45 PM **Lea Shanley** - "The Landscape of COVID-19 Citizen Science and Open Science"
- 3:45 - 4:00 PM **Agency Updates and Open Forum**, [Feedback on FedCCS Meeting Menti](#)

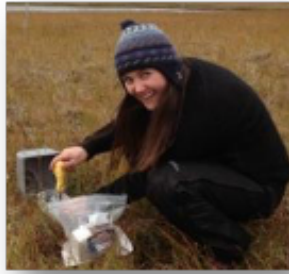
Video Available to
FedCCS Members in
FedCCS Community
Team Space



Click to Watch on
Microsoft Stream

Stream is Only accessible
to DOI Employees

FedCCS May 2020 Talk Abstracts, Speaker Bios, and Resources



Quality of the Indigenous Observation Network (ION)

Nicole Herman-Mercer - U.S. Geological Survey (USGS)

The Indigenous Observation Network (ION) is a collaborative community-based project between the USGS, Yukon River Inter-Tribal Watershed Council, and Yukon River Basin Communities. The project began as a community-based water-quality project in 2005 with community members collecting surface water samples from the Yukon River and majority tributaries in their home communities. Samples are analyzed at the USGS laboratories in Boulder, CO and that data is shared between the USGS, YRITWC, the participating communities, the scientific community, and the public. In this talk, Nicole will discuss findings from a paper that addresses concerns about the accuracy, precision, and reliability of data collected by non-professionals. Field and laboratory protocols and procedures of the Indigenous Observation Network are compared to those utilized by professional scientists. The results Nicole will present suggest that ION data are of high quality, and with consistent protocols and participant training, community based monitoring projects can collect data that are accurate, precise, and reliable.



A Resource of Resources for Citizen Science Data Quality

Hillary Burgess - Coastal Observation and Seabird Survey Team (COASST)

A well-known barrier to achieving the science and policy oriented goals of citizen science is the (*real or perceived*) quality of data generated by these efforts. Hillary will introduce a compendium of guidance documents, manuals, and workbooks produced for citizen science that was compiled by members of the Citizen Science Association (CSA) Data and Metadata Working Group. The resulting spreadsheet is a treasure-trove of resources for monitoring program coordinators, project leads, and volunteer trainers. Each entry provides a link to the resource, information about the authors and intended audience, and which aspects of the data management cycle are addressed. The Data Quality Resource Compendium is the first step in a project to identify gaps and needs for additional resources to support citizen science programs. [The Data Quality Resources for Citizen and Community Science](#) table is intended to be a living library. Collated and described by a group of volunteers, its current form is a starting point and represents the resources we were able to identify at the time of its creation. We note that there are gaps in coverage representing some science areas, geographic/political contexts, and stages of the data lifecycle.

Hillary Burgess (@COASST) is the Science Coordinator for the Coastal Observation and Seabird Survey Team (COASST). Her major duties are ensuring program data are useful and used by the community. She works with partner organizations and coastal community members to document and communicate patterns of marine bird mortality and marine debris along the west coast of the USA. Hillary holds a master's degree in ecology with a focus on citizen science from the University of Washington, and loves hiking in the mountains and spending time on the coast.



The Landscape of COVID-19 Citizen Science and Open Science

Lea Shanley - University of Wisconsin-Madison

The potential of crowdsourcing and citizen science has received growing attention in the disaster response and humanitarian relief communities over the past decade. "Crisis mapping" volunteers, for example, use mobile and web-based applications, aerial and satellite imagery, geospatial platforms, visualization, and computational and statistical models, in combination with crowdsourcing approaches, to support situational awareness and data synthesis for rapid response to disasters and complex humanitarian emergencies. Similarly, citizen science has provided a rapid way of collecting and assessing data for disaster response, such as earthquake intensity maps based on citizen reports submitted online. Citizen scientists also include individuals keeping logs on their health, aiding researchers and hospitals in tracking the spread of influenza and other diseases. The COVID-19 crisis is no exception. This presentation will provide a brief overview of citizen science, crowdsourcing, and open science projects assisting the scientific research and response efforts, and the challenges they face.

Lea Shanley, Ph.D. (@Lea_Shanley) is a Senior Fellow in the Nelson Institute at the University of Wisconsin Madison. Her research interests focus on the intersection of open science, technology innovation, and policy. Previously, Lea served as a White House Presidential Innovation Fellow at NASA, Co-Founder and former Co-Chair of the Federal Community of Practice on Crowdsourcing and Citizen Science (FedCCS) and [CitizenScience.gov](#), and founding director of the Commons Lab at the Wilson Center in Washington, DC. She is a former Citizen Science Association (CSA) Board Member, and now serves as Co-Chair of the CSA Law & Policy Working Group, and co-Chair of the Group on Earth Observation Citizen Science Community Activity (GEO-CITSCI).

Nicole Herman-Mercer is a social scientist at the U.S. Geological Survey (USGS) in the Decision Support Branch of the Water Resources Mission Area's Integrated Information Dissemination Division. Nicole began at the USGS in 2008 as a Student Intern in Support of Native American Relations (SISNAR) working on a case study of Indigenous Observations of Climate Change in a rural Alaska Native Village in the Yukon River Basin while completing her master's degree in social science at the University of Colorado, Denver. Her work explores the interactions between different knowledge systems regarding human dimensions of landscape change and water resources in rural Alaska Native villages. She manages the Indigenous Observation Network and also conducts research on the impacts of climate change on Indigenous communities in Alaska. Currently, her focus is on the co-production of knowledge utilizing community-based and participatory methods in the Arctic and sub-Arctic to form a better understanding of environmental change and impacts on the populations of this region. Methods used in this work include semi-structured interviews with community experts, participatory mapping, and focus groups as well as community and K-12 classroom outreach, workshops, and community meetings.



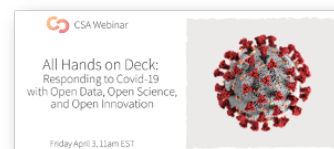
Resources:

- [Indigenous Observation Network \(ION\)](#)
- [Data Quality from a Community-Based, Water-Quality Monitoring Project in the Yukon River Basin \(Citizen Science: Theory and Practice Journal Article\)](#)



Resources:

- [CSA Data and Metadata Working Group Resources](#)
 - [Data Quality Resource Compendium for Citizen and Community Science](#)
 - [Add a Resource to the Data Quality Resource Compendium](#)
- [CSA Webinar 4/28/2020 - Ask Me Anything: Data Quality Resource Compendium](#)
 - [4/28/2020 Webinar Information with Speaker Bios](#)



Resources:

- [All Hands on Deck: Responding to Covid-19 with Open Data, Open Science, and Open Innovation - CSA A Webinar 4/3/2020](#)
 - [CSA Webinar Information with Speaker Bios](#)
- [All Hands on Deck: Citizen Science and Serious Games Tackle Covid-19 - CSA Webinar 4/24/2020](#)
 - [CSA Webinar Information with Speaker Bios](#)
- [United States Citizen Science Association \(CSA\) COVID-19 Resources](#)
- [Australian Citizen Science Association \(ACSA\) COVID-19 Resources](#)
- [CitSci.org Citizen Science Resources During COVID-19](#)
- [SciStarter COVID-19 Resources](#)



The Federal Crowdsourcing and Citizen Science (FedCCS) Community of Practice works across the government to share lessons learned and develop best practices for designing, implementing, and evaluating crowdsourcing and citizen science initiatives. The FedCCS is a grassroots community open to all federal practitioners working on, funding, or just interested in learning more about crowdsourcing and citizen science. We seek to expand and improve the U.S. government's use of crowdsourcing, citizen science, and similar public participation techniques for the purpose of enhancing agency mission, scientific, and societal outcomes.

- **FedCCS Community Meetings** are every last Thursday of the month at 2:30 - 4:00 PM Eastern Time.
- If you are a Federal employee, **JOIN** the FedCCS Listserv by sending an email to: FCPCCS-subscribe-request@listserv.gsa.gov
- **Join the FedCCS Community Team Site** (for Informal Conversations, Sharing Resources, & Collaborating) by sending an email with subject line "**Join FedCCS Team Site**" to the following emails: sophialiu@usgs.gov and openinnovation@usgs.gov
- For more information on FedCCS resources, visit: [CitizenScience.gov](https://citizenscience.gov) and check out the [FedCCS Overview Document \(2-pages\)](#) and [FedCCS File Sharing Trello Site](#) (contains past FedCCS Meeting Notes and other resources)

