

Workshop title:

An Open Science and Reproducible Research Primer for Landscape Ecologists

Objectives and Brief Description:

In recent years many funding agencies, some publishers, and even the United States government have enacted policies that encourage open science and strive for reproducibility; however, the knowledge and skills to implement open science and enable reproducible research are not yet widely taught. The objectives of this workshop are to provide an introduction to the basic tenets of open science and reproducibility, provide hands on-experience with R and RStudio, and provide examples relevant to landscape ecologists.

We will combine an introduction to relevant topics with hands-on exercises. The topics to be covered are: Basic tenets of open science and reproducible research; basics of R and R scripting; using spatial data in R; R Markdown; version control with Git and RStudio; and discovering and using data on the web. The topics will be presented by Jeffrey Hollister (USEPA), Bryan Milstead (USEPA), Betty Kreakie (USEPA), and Scott Chamberlain (rOpenSci).

The intended audience for this workshop is landscape ecologists interested in expanding the accessibility to their research products. R basics will be covered, so novices are welcome. Additionally, topics unfamiliar to many R users will be covered, so seasoned R users will also benefit.

Time/Format Options:

Full-Day Workshop

Hardware/Media:

Projector, screen, and internet connection are required for use by the presenters. Wireless access will be needed for all attendees. Attendees will be expected to provide laptops for their use.

Software:

A list of required software will be finalized several weeks prior to the workshop. At a minimum, attendees will need the following: Git, R, make, and RStudio. All software used will be free and open source and accommodations will be made for multiple operating systems.

Handouts:

No hard copy handouts will be required. All materials will be available via an online repository (GitHub) to which attendees will have access several weeks prior to the workshop.