**­­­CERF 2019 Workshop**

The Next Step with R: Data Management, Graphics, and Functions

Sunday, 3 November | 8:00 AM – 4:00 PM

**About this Workshop:**

This full day workshop is targeted to students and other scientists who are familiar with and have used R before but are interested in learning more about the language of R and how to use it in their daily workflow. Specifically, workshop participants will learn to automate daily tasks, manage their data in a reproducible framework (using tidyverse R packages dplyr and tidyr), make publication ready graphs (using R package ggplot2), and write their own functions during the course of this workshop. Participants will be working on their personal laptops live coding along with the instructors and working through individual and small group exercises.

**Instructors:**

Kim Cressman, Grand Bay NERR | [Kimberly.Cressman@dmr.ms.gov](mailto:Kimberly.Cressman@dmr.ms.gov)

Shannon Dunnigan, Guana Tolomato Matanzas NERR | [Shannon.Dunnigan@FloridaDEP.gov](mailto:Shannon.Dunnigan@FloridaDEP.gov)

**Agenda**

|  |  |
| --- | --- |
| TIME | OBJECTIVES |
| 8:00 – 8:45 | Welcome, Introductions, Workshop Objectives |
| 8:45 – 9:45 | Visualize Data, part 1  “The purpose of visualization is insight, not pictures” – Ben Shneiderman |
| **9:45 – 10:00** | **MORNING BREAK** |
| 10:00 – 10:30 | Visualize Data, part 2  *MINI CHALLENGE* |
| 10:30 – 11:30 | Intro to dplyr - Wrangle Data |
| **11:30 – 13:00** | **LUNCH *(on your own)*** |
| 13:00 – 13:30 | Wrangle Data, part 2 |
| 13:30 – 14:30 | Re-shaping  “Tidy data sets are all alike; but every messy data set is messy in its own way” – Hadley Wickham |
| **14:30 – 14:45** | **AFTERNOON BREAK** |
| 14:45 – 15:45 | Iterate: functions and loops |
| 15:45 | Final Challenge |

|  |
| --- |
|  |