**Afternoon Workshop: *Introduction to SWMPr***

2015 NERRS Annual Meeting

October 25, 1:30 – 5:00

**Workshop website:** <http://swmprats.net/workshop-2015/afternoon-introduction-to-swmpr>

**Instructor:**

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**Description:**

The afternoon workshop will be an ***Introduction to SWMPr***.  SWMPr is an R package written by Marcus Beck and designed specifically for accessing and analysing data collected as part of the NERRS SWMP program. A basic familiarity with R or attendance during the morning session is required. Topics will include an overview of SWMPr, methods for SWMP data retrieval, data organization, and data analysis/visualization.

**Come prepared:**

Attendees must bring a **personal laptop** with the following items installed:

1) R v3.0.0 or later

2) RStudio (current version)

3) SWMPr v2.1.4

4) Training modules: **swmpr1.RProj** and **swmpr2.RProj**

**Additional prep:**

RStudio is required for this course because the training modules are project files designed specifically for RStudio. The training modules can be downloaded from the website link at the top. SWMPr can be downloaded and installed in RStudio by running the following at the command prompt:

install.packages(‘SWMPr’)

Please read the following draft [manuscript](https://github.com/fawda123/swmpr_manu/raw/master/swmpr_manu.pdf) prior to the workshop. This manuscript, currently in review (please don’t share), is an overview of the SWMPr package.

**Agenda**

**1:30pm Software Set‐Up / Help**

Instructors will assist workshop attendees with **last‐minute** software issues.

**2:00pm SWMPr Overview, Data Retrieval, and Organizing**

Objectives: Participants will have an understanding of the purpose of SWMPr and its philosophy. Participants will learn how to retrieve and organize SWMP data using functions in SWMPr.

* Why and what is SWMPr?
* How are data retrieved from CDMO and imported into R with SWMPr?
* What is the basic structure of a ‘swmpr’ data object?
* What are some basic organizing functions in SWMPr and why would they be used?

Agenda:

* Brief overview of SWMPr and its purpose/philosophy
* Getting SWMP data into R
* Understanding the data format
* Initial data processing with SWMPr functions

Materials: swmpr1.Rproj

**3:30pm BREAK (15 min)**

**3:45pm: Intro to Analysis with SWMPr**

Objectives: Participants will have an understanding of the analysis functions in SWMPr:

* What are some basic analyses that can be accomplished with SWMPr?
* What are some of the plotting utilities provided by SWMPr?
* What are some resources for additional learning?

Agenda:

* Generic and specific functions provided by the SWMPr package
* Plotting your data with SWMPr
* Overview of additional resources: SWMPr cookbook and SWMPrats

Materials: swmpr2.Rproj

**5:00pm ADJOURN**