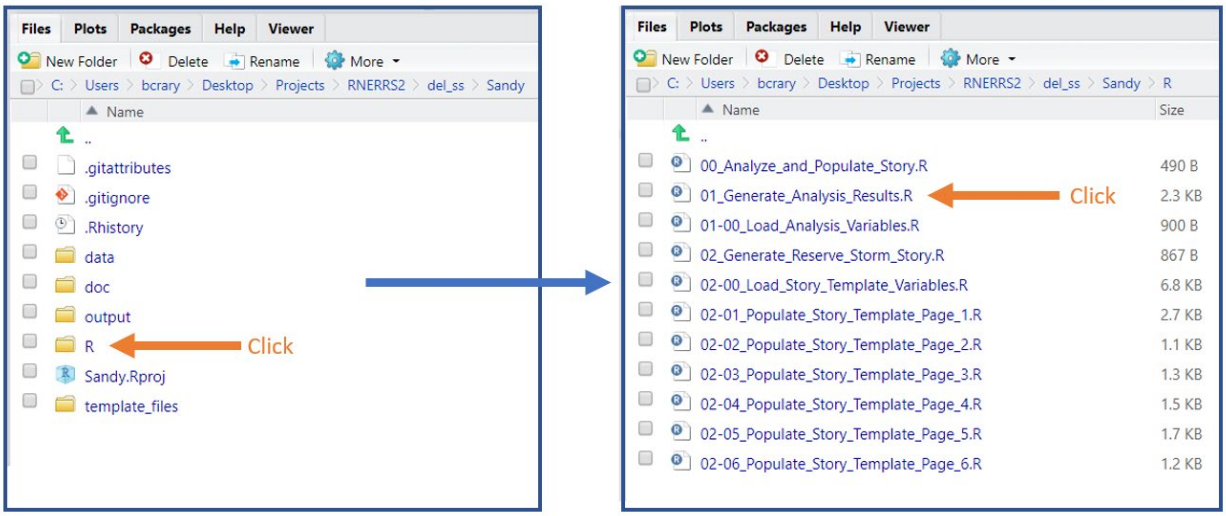
2 Plot Generation Workflow Guide

The **Plot Generation Workflow** conducts all analyses that are described in **Section 5** of the Documentation. The processing is automated in R; however, the user needs to define the plotting and analysis variables for the processing to work properly. The following steps outline the process to set up and execute the Plot Generation Workflow.

1. **Populate the analysis variables in the /data/StormVariables.xlsx file** within the Workspace. There is a tab for each of the graphical and tabular analyses and a list of variables for each that must be populated. If the user does not want to execute any particular function, the user can set the "skip" parameter to "TRUE" and ignore all other variables in that tab. There are notes next to each variable entry field and an example of a completed variable spreadsheet provided in the Workspace. For reference and guidance, an example file is provided: see "EXAMPLE_StormVariables."
2. **Populate the mapping variables in the /data/StormTrackVariables.xlsx** file within the Workspace. There are two tabs for the single track map and two tabs for the multiple track map. There are notes next to each variable entry field and an example of a completed variable spreadsheet provided in the Workspace. For reference and guidance, an example file is provided: see "EXAMPLE_StormTrackVariables.xlsx."
3. **Launch the .Rproj file ("R Project") in the parent directory of the Workspace.** R Studio will launch and the files pane in the bottom right will show the Workspace. For example, you would double-click "Sandy.Rproj" to launch the R session and you would see the R files for this project listed by clicking on the "R" folder (see screenshot below).
4. **Open R/01_Generate_Analysis_Results.R** within R Studio by clicking on the file (see screenshot below).

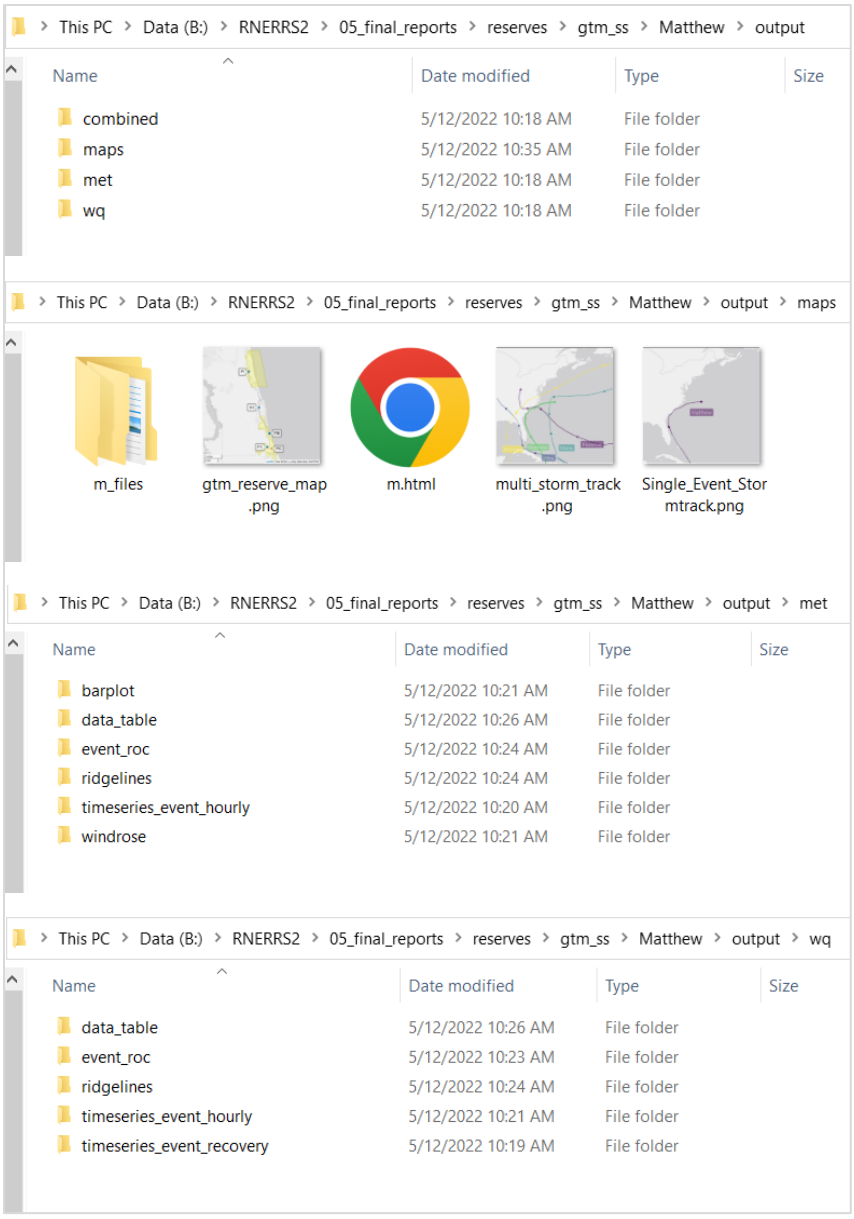


Screenshots of opening 01_Generate_Analysis_Results.R in the R project

5. **Execute the analysis script by clicking the 'Source' button in R Studio.** This script will perform all analyses described in Section 3 of the documentation.

How to execute the R analysis script

6. **Verify that plots and tables have been generated** by reviewing the **/output** directory of the Workspace. Plots and tables will be placed into various subfolders of this directory. After a review of the plots, the user may need to iterate on the time periods plotted to adjust onset and recovery dates as well as how dates are displayed.



Example of /output directory and subfolders (/output, /output/maps, /output/met, and /output/wq).