From: NERRS ListServe for R Users on behalf of Dave Eslinger - NOAA Federal
To: NERRS-RLIST@LISTSERV.SC.EDU
Subject: R 4.0, SWMPrExtension and Status Reports
Date: Friday, May 1, 2020 6:52:24 PM
Attachments: SWMPrExstension_R4_update_commands.R
Reserve_Level_Template.zip

Hi folks,

Welcome to the NERRS R-listerver! After sending Kim or me your names, you have been added to the list by Melissa Ide. If you know others who want to be as cool as you now are, please have them email Melissa (melissa@baruch.sc.edu) and ask to be added to the NERRS-RLIST.

As you probably know, R 4.0 dropped on Monday. It has a number of changes and improvements. Some of those, however, broke some of our existing functions. However, I think I have everything working now, more or less. Well, MORE than less, actually. There is more to be done, but I wanted to get you started with what was out there.

Note that whenever you install a new version of R, you will have to reinstall all the libraries you have as well. They are stored in different locations and probably not compatible. So you should plan for the update process to take some time.

If you want to get a list of all the non-base packages you have, you can run the following commands from an R prompt (i.e., console window in RStudio):

```
ip <- as.data.frame(installed.packages()[,c(1,3:4)])

rownames(ip) <- NULL

ip <- ip[is.na(ip$Priority),1:2,drop=FALSE]
```

Now you have a list, ip, that you can look at. It will have a bunch of stuff you didn't know you had. just look for things you remember adding and want to put on your new set up. All the other things are probably dependencies of the packages you loaded.

I recommend downloading R 4.0 from CRAN (https://cran.r-project.org/) and the newest version of RStudio (https://rstudio.com/products/rstudio/download/). As usual, install R first It is probably best to uninstall older versions. Not strictly required, so you can keep them around if you think you have a reason.

After installing R, go ahead and install RStudio. Now you want to reinstall all the libraries you were using. To make that easier to do for SWMPrExtension, I've attached an R script that has the install.packages commands you will need, as well as a couple others to install tiny_tex and phantom_js.

Once that is done, start it up and open the attached file *SWMPrExstension_R4_update_commands.R.*

This will install everything you need. You may notice that the list is shorter than in the installation file in your Status Reports directory, but that is because many of these packages automatically load the other packages they need. This was the quickest way I found to update.

Also notice that you have to (as of today) still load the newest version of SWMPrExtension, v1.1.4, from the github repo. That is what the last shown command does. It has been submitted to CRAN, but they haven't responded yet. The one on GitHub will work with teh current R 4.0 setup.

I'm also attaching a zip file with new versions of the programs needed to create your status reports. The ones you got from CDMO will not work with the new version of R. You should unzip the attached zip document into a temporary location, then rename your old R and figure_files directories and move these new ones into their previous location. If you have the newest version of the *Reserve_Level_Plotting_Variables.xlsx* file, you can skip the figure_files. Otherwise, transfer your figure contents to the new directory and change the Variables spreadsheet to match your previous one. Then you should be good to go!

Note that the resulting powerpoint file will be a bit different. This go-round it ~~may~~ will require more hand editing. There have been a huge number of changes to the officer package, which is what does the powerpoint magic, and I've not yet tracked down all the issues. But I wanted you to have something if you were chomping at the bit to do a status report while you have(?) the time.

Let me know your questions, I'm sure there will be some!

Cheers,
Dave

Dave Eslinger, Ph.D.
Oceanographer
Office for Coastal Management
2234 S. Hobson Ave.
Charleston, SC 29405
(843) 740-1270

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